

Radford Army Ammunition Plant

**Comprehensive Ground Water
Monitoring Report
Response**

30 May 1995

Environmental Resources Management, Inc.
3140 Chaparral Drive, S.W. - Suite 201
Roanoke, Virginia 24018

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In November 1994, the Department of Environmental Quality (DEQ) completed a Comprehensive Ground Water Monitoring Evaluation (CME) at the Radford Army Ammunition Plant (RAAP) in Radford, Virginia. The CME reviewed sites 4, 10 and 16 for compliance with the Virginia Hazardous Waste Management Regulations (VR 672-10-1) for ground water monitoring.

The CME report was completed and sent to RAAP 28 March 1994. In that report, the following deficiencies were noted. Completion dates are also included below.

| | |
|--------------------------------------------------------------|--------------------------------------|
| Compliance Schedules for Sites 4, 5, 7, 10, and 16 | 1 June 1995 |
| Site 10 - Establish Background Groundwater Concentrations | 1 June 1995 |
| Site 10 - Wells D4, DG-1, DDH-4 | Next Sampling Event |
| Site 4 - Well WC8B | Next Sampling Event |
| Sampling and Analysis Plan Revisions | 1 June 1995 Implementation 1 July |

Completion of Phase I and Phase II for Sites 4, 5, 7, 10 and 16, as set out in RAAP's August 1992 Ground Water Quality Assessment Plan (GWQAP), will best be addressed in an updated GWQAP. The updated GWQAP is scheduled to be completed by 31 August 1995. The originally anticipated completion date was July 1995 as presented on the 8 May 1995 CME Schedule provided to the DEQ. However, it is anticipated that there will be difficulties encountered in determining the appropriate monitoring data to be used for background calculations at some of the sites. Therefore, the schedule has been extended.

As presented in Section 2.0, Phase I activities will begin immediately. Included with the submittal of the Phase I findings by 31 August 1995 will be a list of proposed action items to fill any data gaps identified. These activities will take place during Phase II. A schedule for Phase II activities (beginning at DEQ approval of the Phase II work scope) will be provided at that time. Phase II activities will not commence until RAAP has received the DEQ's comments on the proposed scope.

Section 2.0 presents the compliance schedules for HWMUs 4, 5, 7, 10 and 16. These schedules are based on currently available information.

Section 3.0 addresses DEQ approval to cease monitoring certain ground water wells. All wells will remain in service to receive static water level measurements.

Section 4.0 addresses the calculation of background ground water concentration at HWMU 10. The statistical method used is the Ground Water Information Tracking System with Statistical Analysis Capability (GRITS-STAT, v. 4.2), as recommended by EPA and the Virginia DEQ.

Section 5.0 contains the updated Sampling and Analysis Plan (SAP) which incorporates the updated Ground Water Monitoring Lists, site maps depicting ground water flow, and additional changes requested by DEQ in the CME of 28 March 1994.

2.1

HWMU 4Phase I:

- Finalize site closure
- Complete statistics using GRITS-STAT
- Check deepest and/or most downgradient well for contamination
- Develop plume maps for significant increases for a respective contaminant or group of contaminants (metals, semivolatiles, volatiles)
- Identify data gaps to be filled in Phase II

Phase II:

- Additional well installation, if necessary
- Perform statistics and check affected contaminants
- Impacts on groundwater - seasonal variations, sinkholes, geology

2.2

HWMU 5Phase I:

- Complete statistics using GRITS-STAT
- Check deepest and/or most down-gradient well for contamination
- Develop plume maps
- Identify data gaps to be filled in Phase II

Phase II:

- Additional well installation, if necessary
- Perform statistics and check affected contaminants
- Impacts on groundwater

2.3

HWMU 7Phase I:

- Complete statistics using GRITS-STAT
- Check deepest and/or most down-gradient well for contamination
- Develop plume maps
- Identify data gaps to be filled in Phase II

Phase II:

- Address downgradient wells and river issues
- Determine if DEQ Water Division permit is necessary

- Prepare permit application, if necessary
- Impacts on ground water and surface water

2.4

HWMU 10

- Phase I:**
- Complete statistics using GRITS-STAT
 - Check deepest and/or most down-gradient well for contamination
 - Develop plume maps
 - Identify data gaps to be filled in Phase II
- Phase II:**
- Additional well installation, if necessary
 - Perform statistics and check affected contaminants
 - Complete closure
 - Impacts on groundwater

2.5

HWMU 16

- Phase I:**
- Complete statistics using GRITS-STAT
 - Check deepest and/or most down-gradient well for contamination
 - Develop plume maps
 - Fingerprint plume to distinguish from SWMUs hydraulically upgradient and downgradient
 - Identify data gaps to be filled in Phase II
- Phase II:**
- Additional well installation, if necessary
 - Perform statistics and check affected contaminants
 - Impacts on groundwater

The tentatively scheduled completion date for Phase I is 31 August 1995. Conclusions and data gaps will be provided to the DEQ at that time.

3.1 HWMU 4 - WELL WC8B

On page 17 of the DEQ CME report, the Department agrees that Well WC8B is located side gradient to the unit according to the groundwater potentiometric maps and can, therefore, be deleted from the compliance monitoring system.

RAAP will not abandon the well but will use it instead to aid in potentiometric map updating.

3.2 HWMU 5 - WELL S5W6

In accordance with the 20 April 1995 letter from Mr. Glenn von Gonten, DEQ, to Mr. Jerry Redder, RAAP, RAAP will cease sampling Well S5W6.

This well is in close proximity to a newly constructed well cluster, 5WC21/5WC22/5WC23. RAAP will continue to use this well for static water level measurements.

3.3 HWMU 7 - WELL S7W9

In accordance with the 20 April 1995 letter from Mr. Glenn von Gonten, DEQ, to Mr. Jerry Redder, RAAP, RAAP will cease sampling Well S7W9.

This well is located side gradient to the unit according to the ground water potentiometric map for Site 7. RAAP will continue to use this well for static water level measurements.

3.4 HWMU 10 - WELLS D4, DG-1, DDH-4, AND BOREHOLE**Wells D4, DG-1, DDH-4:**

On page 17 of the 28 March 1995 DEQ CME Report, Section 8.1.2, the Department is allowing RAAP to cease sampling upgradient wells D4 and DG1 since the "background groundwater quality has been adequately determined". However, upgradient well DDH4 has been compromised due to preconstruction activities around the site, and will not be used for continuing background monitoring. It will, however, be utilized for

potentiometric map evaluation. RAAP will begin utilizing monitoring well D4, which is hydraulically upgradient of Site 10, as of the next sampling event.

Well DG-1 will not be abandoned and will be used to aid in potentiometric map evaluation. Neither Well DG-1 nor Well DDH-4 will be flushed mounted as this would enhance the chances of damage due to the impending closure construction.

Borehole:

On pages 12 and 21 of the 28 March 1995 DEQ CME Report, the Department states that any open boreholes must be properly sealed using DEQ approved procedures. The RAAP anticipates beginning construction for closure of Site 10 beginning September/October 1995. This construction will involve extensive excavation of the site if the submitted closure plan is approved. Closure calls for removing all material down to natural soil.

As discussed in a 10 May 1995 telephone conversation between Jerry Redder, RAAP, Glenn von Gonten, DEQ, and Christel Ackerman, ERM, RAAP will use a mixture of portland cement and 3 to 5% bentonite to fill the borehole(s).

Site 10 is an inactive RCRA facility currently in detection monitoring. The Site was an equalization basin for the Biological Treatment System. The basin has not been in use since March 1994. The basin was constructed in 1978 and is lined with a soil/cement/clay liner. The basin received waste waters from propellant manufacturing, pretreated waste waters from nitroglycerine production, and waste water from the recovery of ethyl ether.

As discussed on pages 10, 14, 18 and 21 of the 28 March 1995 CME, the background concentrations for the monitoring parameters at Site 10 have been calculated. The GRITS/STAT program was used for this purpose and, as a result, ground water data from the four quarters of 1992 and 1993 were utilized. The GRITS/STAT program requires eight consecutive sampling events for the calculation of background concentrations.

The parameters are those found on the updated Ground Water Monitoring Lists for Site 10 in the 28 March 1995 CME report. The upgradient background concentration was calculated using data from Well D4. The down gradient background concentrations were calculated for each downgradient well: 10MW1, D3, D3D, DDH2.

SITE 10 BACKGROUND CONCENTRATIONS (ppb)

| PARAMETERS | D4 | 10MW1 | D3 | D3D | DDH2 |
|---------------------|-----------|-----------|------------|------------|------------|
| 2,4-D | 6.000 | 6.000 | 6.000 | 6.000 | 6.000 |
| 2,4-DNT | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 |
| 2,6-DNT | 0.500 | 0.500 | 0.690 | 0.690 | 0.690 |
| 2,4,5-TP | 0.850 | 0.850 | 0.850 | 0.850 | 0.850 |
| Ag | 0.112 | 0.138 | 0.150 | 0.250 | 0.287 |
| Ag, dis | 0.100 | 0.163 | 0.213 | 0.175 | 0.313 |
| Alpha | 1.800 | 2.912 | 2.950 | 4.488 | 3.588 |
| As | 1.625 | 2.250 | 1.000 | 1.000 | 1.000 |
| As, dis | 1.000 | 1.875 | 1.000 | 1.000 | 1.000 |
| BHC-D (Lindane) | 0.020 | 0.020 | 0.020 | 0.020 | 0.020 |
| Ba | 130.875 | 111.000 | 29.625 | 33.250 | 54.250 |
| Ba, dis | 116.750 | 100.375 | 42.125 | 43.875 | 53.750 |
| Beta | 3.450 | 5.050 | 5.425 | 5.425 | 4.688 |
| Cd | 0.188 | 0.150 | 0.106 | 0.112 | 0.425 |
| Cd, dis | 0.075 | 0.069 | 0.100 | 0.063 | 0.053 |
| Chloride | 20125.000 | 14125.000 | 25375.000 | 21125.000 | 27375.000 |
| Chloroform | 1.725 | 16.525 | 0.494 | 1.056 | 0.250 |
| Coliform, total | 1.000 | 1.250 | 1.000 | 1.125 | 1.375 |
| Cond | 371.250 | 556.875 | 1146.563 | 1109.688 | 1139.062 |
| Cr | 10.125 | 7.375 | 5.000 | 5.000 | 11.250 |
| Cr, dis | 5.000 | 5.000 | 5.000 | 5.000 | 5.000 |
| Cu | 6.875 | 4.688 | 2.625 | 5.000 | 5.438 |
| Cu, dis | 0.750 | 1.375 | 0.875 | 1.500 | 1.438 |
| Cyanide | 10.625 | 10.000 | 10.000 | 10.000 | 10.000 |
| Di-n-Butylphthalate | 3.450 | 1.800 | 1.800 | 1.800 | 1.800 |
| Endrin | 3.000 | 3.000 | 3.000 | 3.000 | 3.000 |
| Fe | 13196.500 | 1294.625 | 326.500 | 161.750 | 2412.500 |
| Fe, dis | 15.125 | 13.750 | 23.125 | 19.500 | 27.375 |
| Flouride | 687.500 | 606.250 | 587.500 | 606.250 | 256.250 |
| Hg | 0.125 | 0.100 | 0.100 | 0.138 | 0.100 |
| Hg, dis | 0.100 | 0.100 | 0.100 | 0.100 | 0.100 |
| Mn | 88.762 | 25.613 | 9.713 | 7.900 | 39.888 |
| Mn, dis | 1.888 | 0.575 | 0.450 | 0.725 | 3.600 |
| Methoxychlor | 0.880 | 0.880 | 0.880 | 0.880 | 0.880 |
| Na | 7862.500 | 11725.000 | 18875.000 | 14043.750 | 19000.000 |
| Na, dis | 9862.500 | 14887.500 | 22375.000 | 15812.625 | 20875.000 |
| Ni | 9.875 | 14.625 | 9.063 | 8.813 | 9.875 |
| Ni, dis | 7.500 | 15.938 | 7.500 | 7.500 | 7.500 |
| Nitrate | 1387.500 | 2943.750 | 26125.000 | 24500.000 | 69000.000 |
| Pb | 3.563 | 1.188 | 0.500 | 1.125 | 0.875 |
| Pb, dis | 0.938 | 0.563 | 0.688 | 0.563 | 0.938 |
| Phenols | 1.750 | 1.000 | 1.750 | 1.000 | 1.000 |
| Pa | 0.588 | 88.125 | 0.638 | 0.762 | 0.575 |
| Sulfate | 18375.000 | 36500.000 | 246250.016 | 218375.000 | 368750.000 |
| Se | 1.000 | 1.000 | 1.000 | 1.000 | 1.125 |

SITE 10 BACKGROUND CONCENTRATIONS (ppb)

The updated Sampling and Analysis Plan (SAP) is attached. The updates include DEQ comments and suggestions found on pages 14, 18 and 21 of the 28 March 1995 CME report. The Ground Water Monitoring Lists for Sites 4,5,7,10 and 16 were updated as well as the direction of ground water flow for several sites. These are all included in the Appendices of the attached plan.

Data Set Summary

Report Printed: 05-30-1995 12:40

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:2,4-D 2,4-Dichlorophenoxyacetic acid

CAS Number: 94-75-7

 MCL: 0.000 ppb ACL: 0.000 ppb

Detect Limit: 12.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Jun 23 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Aug 05 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Dec 03 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Mar 09 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Jun 10 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Aug 31 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Nov 02 1993 | 6.000 ppb | 1.792 (* Nondetect *) |

Well ID:D4

Summary Statistics

Observations (N): 8

Nondetects (%ND):100

| | |
|------------|-----------|
| Minimum: | 6.000 ppb |
| Maximum: | 6.000 ppb |
| Mean: | 6.000 ppb |
| Std. Dev.: | 0.000 ppb |

| | |
|---------------|-------|
| Ln Minimum: | 1.792 |
| Ln Maximum: | 1.792 |
| Ln Mean: | 1.792 |
| Ln Std. Dev.: | 0.000 |

Well ID:10MW1

Sample Date Observation Ln

| | | |
|-------------|-----------|-----------------------|
| Jun 23 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Aug 05 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Dec 03 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Mar 09 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Jun 10 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Aug 31 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Nov 02 1993 | 6.000 ppb | 1.792 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 6.000 ppb | Ln Minimum: | 1.792 |
| Maximum: | 6.000 ppb | Ln Maximum: | 1.792 |
| Mean: | 6.000 ppb | Ln Mean: | 1.792 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Jun 23 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Aug 05 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Dec 03 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Mar 09 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Jun 10 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Aug 31 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Nov 02 1993 | 6.000 ppb | 1.792 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 6.000 ppb | Ln Minimum: | 1.792 |
| Maximum: | 6.000 ppb | Ln Maximum: | 1.792 |
| Mean: | 6.000 ppb | Ln Mean: | 1.792 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Jun 23 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Aug 05 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Dec 03 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Mar 09 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Jun 10 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Aug 31 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Nov 02 1993 | 6.000 ppb | 1.792 (* Nondetect *) |

Well ID:D3D Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 6.000 ppb | Ln Minimum: | 1.792 |
| Maximum: | 6.000 ppb | Ln Maximum: | 1.792 |
| Mean: | 6.000 ppb | Ln Mean: | 1.792 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Jun 23 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Aug 05 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Dec 03 1992 | 6.000 ppb | 1.792 (* Nondetect *) |
| Mar 09 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Jun 10 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Aug 31 1993 | 6.000 ppb | 1.792 (* Nondetect *) |
| Nov 02 1993 | 6.000 ppb | 1.792 (* Nondetect *) |

Well ID:DDH2 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 6.000 ppb | Ln Minimum: | 1.792 |
| Maximum: | 6.000 ppb | Ln Maximum: | 1.792 |
| Mean: | 6.000 ppb | Ln Mean: | 1.792 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Data Set Summary

Report Printed: 05-30-1995 12:42

Facility:RAAP Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:245TP 2,4,5-Trichlor-phenoxypropionic acid

CAS Number: 93-72-1

MCL: 10.000 ppb

ACL: 0.000 ppb

Detect Limit: 1.700 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Jun 23 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Aug 05 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Dec 03 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Mar 09 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Jun 10 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Aug 31 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Nov 02 1993 | 0.850 ppb | -0.163 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND):100

| | |
|------------|-----------|
| Minimum: | 0.850 ppb |
| Maximum: | 0.850 ppb |
| Mean: | 0.850 ppb |
| Std. Dev.: | 0.000 ppb |

| | |
|---------------|--------|
| Ln Minimum: | -0.163 |
| Ln Maximum: | -0.163 |
| Ln Mean: | -0.163 |
| Ln Std. Dev.: | 0.000 |

Well ID:10MW1

Sample Date Observation Ln

| | | |
|-------------|-----------|------------------------|
| Mar 30 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Jun 23 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Aug 05 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Dec 03 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Mar 09 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Jun 10 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Aug 31 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Nov 02 1993 | 0.850 ppb | -0.163 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.850 ppb | Ln Minimum: | -0.163 |
| Maximum: | 0.850 ppb | Ln Maximum: | -0.163 |
| Mean: | 0.850 ppb | Ln Mean: | -0.163 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Jun 23 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Aug 05 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Dec 03 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Mar 09 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Jun 10 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Aug 31 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Nov 02 1993 | 0.850 ppb | -0.163 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.850 ppb | Ln Minimum: | -0.163 |
| Maximum: | 0.850 ppb | Ln Maximum: | -0.163 |
| Mean: | 0.850 ppb | Ln Mean: | -0.163 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Jun 23 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Aug 05 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Dec 03 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Mar 09 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Jun 10 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Aug 31 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Nov 02 1993 | 0.850 ppb | -0.163 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N): 8
Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.850 ppb | Ln Minimum: | -0.163 |
| Maximum: | 0.850 ppb | Ln Maximum: | -0.163 |
| Mean: | 0.850 ppb | Ln Mean: | -0.163 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Jun 23 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Aug 05 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Dec 03 1992 | 0.850 ppb | -0.163 (* Nondetect *) |
| Mar 09 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Jun 10 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Aug 31 1993 | 0.850 ppb | -0.163 (* Nondetect *) |
| Nov 02 1993 | 0.850 ppb | -0.163 (* Nondetect *) |

Well ID:DDH2

Summary Statistics

Observations (N): 8
Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.850 ppb | Ln Minimum: | -0.163 |
| Maximum: | 0.850 ppb | Ln Maximum: | -0.163 |
| Mean: | 0.850 ppb | Ln Mean: | -0.163 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Data Set Summary

Report Printed: 05-30-1995 10:39

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:2,4-DNT 2,4-Dinitrotoluene

CAS Number: 121-14-2

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 0.200 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Dec 03 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Mar 09 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 10 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND):100

Minimum: 0.100 ppb
Maximum: 0.100 ppb
Mean: 0.100 ppb
Std. Dev.: 0.000 ppb

Ln Minimum: -2.303
Ln Maximum: -2.303
Ln Mean: -2.303
Ln Std. Dev.: 0.000

Well ID:10MW1

Sample Date Observation Ln

| | | |
|-------------|-----------|------------------------|
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Dec 03 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Mar 09 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 10 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.100 ppb | Ln Maximum: | -2.303 |
| Mean: | 0.100 ppb | Ln Mean: | -2.303 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Dec 03 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Mar 09 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 10 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.100 ppb | Ln Maximum: | -2.303 |
| Mean: | 0.100 ppb | Ln Mean: | -2.303 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Dec 03 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Mar 09 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 10 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.100 ppb | Ln Maximum: | -2.303 |
| Mean: | 0.100 ppb | Ln Mean: | -2.303 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Dec 03 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Mar 09 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 10 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.100 ppb | Ln Maximum: | -2.303 |
| Mean: | 0.100 ppb | Ln Mean: | -2.303 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Data Set Summary

Report Printed: 05-30-1995 10:46

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:2,6-DNT 2,6-Dinitrotoluene

CAS Number: 606-20-2

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 0.100 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 23 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 05 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 100

| | |
|------------|-----------|
| Minimum: | 0.050 ppb |
| Maximum: | 0.050 ppb |
| Mean: | 0.050 ppb |
| Std. Dev.: | 0.000 ppb |

| | |
|---------------|--------|
| Ln Minimum: | -2.996 |
| Ln Maximum: | -2.996 |
| Ln Mean: | -2.996 |
| Ln Std. Dev.: | 0.000 |

Well ID:10MW1

Sample Date Observation Ln

| | | |
|-------------|-----------|------------------------|
| Mar 30 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 23 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 05 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.050 ppb | Ln Maximum: | -2.996 |
| Mean: | 0.050 ppb | Ln Mean: | -2.996 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3 Summary Statistics

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.200 ppb | -1.609 |
| Jun 23 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 05 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 88

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.200 ppb | Ln Maximum: | -1.609 |
| Mean: | 0.069 ppb | Ln Mean: | -2.822 |
| Std. Dev.: | 0.053 ppb | Ln Std. Dev.: | 0.490 |

Well ID:D3D Summary Statistics

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.200 ppb | -1.609 |
| Jun 23 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 05 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 88

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.200 ppb | Ln Maximum: | -1.609 |
| Mean: | 0.069 ppb | Ln Mean: | -2.822 |
| Std. Dev.: | 0.053 ppb | Ln Std. Dev.: | 0.490 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.200 ppb | -1.609 |
| Jun 23 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 05 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 88

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.200 ppb | Ln Maximum: | -1.609 |
| Mean: | 0.069 ppb | Ln Mean: | -2.822 |
| Std. Dev.: | 0.053 ppb | Ln Std. Dev.: | 0.490 |

Data Set Summary

Report Printed: 05-30-1995 10:50

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:Ag Silver, total

CAS Number: 7440-22-4

MCL: 50.000 ppb

ACL: 0.000 ppb

Detect Limit: 0.200 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.200 ppb | -1.609 |
| Dec 03 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Mar 09 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 10 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 88

| | |
|------------|-----------|
| Minimum: | 0.100 ppb |
| Maximum: | 0.200 ppb |
| Mean: | 0.112 ppb |
| Std. Dev.: | 0.035 ppb |

| | |
|---------------|--------|
| Ln Minimum: | -2.303 |
| Ln Maximum: | -1.609 |
| Ln Mean: | -2.216 |
| Ln Std. Dev.: | 0.245 |

Well ID:10MW1

Sample Date Observation Ln

| | | |
|-------------|-----------|------------------------|
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Dec 03 1992 | 0.400 ppb | -0.916 |
| Mar 09 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 10 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 88

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.400 ppb | Ln Maximum: | -0.916 |
| Mean: | 0.138 ppb | Ln Mean: | -2.129 |
| Std. Dev.: | 0.106 ppb | Ln Std. Dev.: | 0.490 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.300 ppb | -1.204 |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Dec 03 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Mar 09 1993 | 0.300 ppb | -1.204 |
| Jun 10 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 75

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.300 ppb | Ln Maximum: | -1.204 |
| Mean: | 0.150 ppb | Ln Mean: | -2.028 |
| Std. Dev.: | 0.093 ppb | Ln Std. Dev.: | 0.509 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.500 ppb | -0.693 |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Dec 03 1992 | 0.600 ppb | -0.511 |
| Mar 09 1993 | 0.300 ppb | -1.204 |
| Jun 10 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 31 1993 | 0.200 ppb | -1.609 |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 50

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.600 ppb | Ln Maximum: | -0.511 |
| Mean: | 0.250 ppb | Ln Mean: | -1.653 |
| Std. Dev.: | 0.200 ppb | Ln Std. Dev.: | 0.767 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.500 ppb | -0.693 |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Dec 03 1992 | 0.600 ppb | -0.511 |
| Mar 09 1993 | 0.300 ppb | -1.204 |
| Jun 10 1993 | 0.400 ppb | -0.916 |
| Aug 31 1993 | 0.200 ppb | -1.609 |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 38

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.600 ppb | Ln Maximum: | -0.511 |
| Mean: | 0.287 ppb | Ln Mean: | -1.480 |
| Std. Dev.: | 0.196 ppb | Ln Std. Dev.: | 0.756 |

Data Set Summary
Report Printed: 05-30-1995 10:52

Facility:RAAP Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford ST:VA Zip:24141
County:MONTGOMERY

Contact:Jerry Redder
Phone:(703) 639-7536

Permit Type:Detection

Constituent:Ag dis Silver, dissolved

CAS Number: 7440-22-4

MCL: 50.000 ppb

ACL: 0.000 ppb

Detect Limit: 0.200 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Dec 03 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Mar 09 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 10 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 100

Minimum: 0.100 ppb
Maximum: 0.100 ppb
Mean: 0.100 ppb
Std. Dev.: 0.000 ppb

Ln Minimum: -2.303
Ln Maximum: -2.303
Ln Mean: -2.303
Ln Std. Dev.: 0.000

Well ID:10MW1

| Sample Date | Observation | Ln |
|-------------|-------------|----|
|-------------|-------------|----|

| | | |
|-------------|-----------|------------------------|
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.400 ppb | -2.303 (* Nondetect *) |
| Dec 03 1992 | 0.100 ppb | -0.916 |
| Mar 09 1993 | 0.300 ppb | -2.303 (* Nondetect *) |
| Jun 10 1993 | 0.100 ppb | -1.204 |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 75

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.400 ppb | Ln Maximum: | -0.916 |
| Mean: | 0.163 ppb | Ln Mean: | -1.992 |
| Std. Dev.: | 0.119 ppb | Ln Std. Dev.: | 0.580 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.200 ppb | -1.609 |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.300 ppb | -1.204 |
| Dec 03 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Mar 09 1993 | 0.300 ppb | -1.204 |
| Jun 10 1993 | 0.500 ppb | -0.693 |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 50

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.500 ppb | Ln Maximum: | -0.693 |
| Mean: | 0.213 ppb | Ln Mean: | -1.740 |
| Std. Dev.: | 0.146 ppb | Ln Std. Dev.: | 0.650 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.300 ppb | -1.204 |
| Dec 03 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Mar 09 1993 | 0.300 ppb | -1.204 |
| Jun 10 1993 | 0.300 ppb | -1.204 |
| Aug 31 1993 | 0.100 ppb | -2.303 (* Nondetect *) |
| Nov 02 1993 | 0.100 ppb | -2.303 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 63

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.300 ppb | Ln Maximum: | -1.204 |
| Mean: | 0.175 ppb | Ln Mean: | -1.891 |
| Std. Dev.: | 0.104 ppb | Ln Std. Dev.: | 0.569 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.400 ppb | -0.916 |
| Jun 23 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Aug 05 1992 | 0.400 ppb | -0.916 |
| Dec 03 1992 | 0.100 ppb | -2.303 (* Nondetect *) |
| Mar 09 1993 | 0.400 ppb | -0.916 |
| Jun 10 1993 | 0.500 ppb | -0.693 |
| Aug 31 1993 | 0.200 ppb | -1.609 |
| Nov 02 1993 | 0.400 ppb | -0.916 |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 25

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.100 ppb | Ln Minimum: | -2.303 |
| Maximum: | 0.500 ppb | Ln Maximum: | -0.693 |
| Mean: | 0.313 ppb | Ln Mean: | -1.322 |
| Std. Dev.: | 0.155 ppb | Ln Std. Dev.: | 0.661 |

Data Set Summary

Report Printed: 05-30-1995 10:53

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:Alpha Alpha emission, total

CAS Number:12587-46-1

MCL: 0.000 pCi/l

ACL: 0.000 pCi/l

Detect Limit: 1.000 pCi/l

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|--------|
| Mar 30 1992 | 2.500 pCi/l | 0.916 |
| Jun 23 1992 | 0.800 pCi/l | -0.223 |
| Aug 05 1992 | 0.800 pCi/l | -0.223 |
| Dec 03 1992 | 2.100 pCi/l | 0.742 |
| Mar 09 1993 | 1.600 pCi/l | 0.470 |
| Jun 10 1993 | 3.300 pCi/l | 1.194 |
| Aug 31 1993 | 2.600 pCi/l | 0.956 |
| Nov 02 1993 | 1.100 pCi/l | 0.095 |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 0

| | |
|------------|-------------|
| Minimum: | 0.800 pCi/l |
| Maximum: | 3.300 pCi/l |
| Mean: | 1.850 pCi/l |
| Std. Dev.: | 0.924 pCi/l |

| | |
|---------------|--------|
| Ln Minimum: | -0.223 |
| Ln Maximum: | 1.194 |
| Ln Mean: | 0.491 |
| Ln Std. Dev.: | 0.552 |

Well ID:10MW1

Sample Date Observation Ln

| | | |
|-------------|-------------|-------|
| Mar 30 1992 | 9.200 pCi/l | 2.219 |
| Jun 23 1992 | 1.300 pCi/l | 0.262 |
| Aug 05 1992 | 1.200 pCi/l | 0.182 |
| Dec 03 1992 | 3.400 pCi/l | 1.224 |
| Mar 09 1993 | 1.600 pCi/l | 0.470 |
| Jun 10 1993 | 2.000 pCi/l | 0.693 |
| Aug 31 1993 | 2.000 pCi/l | 0.693 |
| Nov 02 1993 | 2.600 pCi/l | 0.956 |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 0

| | | | |
|------------|-------------|---------------|-------|
| Minimum: | 1.200 pCi/l | Ln Minimum: | 0.182 |
| Maximum: | 9.200 pCi/l | Ln Maximum: | 2.219 |
| Mean: | 2.912 pCi/l | Ln Mean: | 0.837 |
| Std. Dev.: | 2.640 pCi/l | Ln Std. Dev.: | 0.656 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|-------|
| Mar 30 1992 | 6.400 pCi/l | 1.856 |
| Jun 23 1992 | 3.900 pCi/l | 1.361 |
| Aug 05 1992 | 1.300 pCi/l | 0.262 |
| Dec 03 1992 | 3.800 pCi/l | 1.335 |
| Mar 09 1993 | 1.900 pCi/l | 0.642 |
| Jun 10 1993 | 1.700 pCi/l | 0.531 |
| Aug 31 1993 | 2.400 pCi/l | 0.875 |
| Nov 02 1993 | 2.200 pCi/l | 0.788 |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 0

| | | | |
|------------|-------------|---------------|-------|
| Minimum: | 1.300 pCi/l | Ln Minimum: | 0.262 |
| Maximum: | 6.400 pCi/l | Ln Maximum: | 1.856 |
| Mean: | 2.950 pCi/l | Ln Mean: | 0.956 |
| Std. Dev.: | 1.681 pCi/l | Ln Std. Dev.: | 0.523 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|--------------|-------|
| Mar 30 1992 | 12.300 pCi/l | 2.510 |
| Jun 23 1992 | 3.400 pCi/l | 1.224 |
| Aug 05 1992 | 4.700 pCi/l | 1.548 |
| Dec 03 1992 | 5.000 pCi/l | 1.609 |
| Mar 09 1993 | 1.800 pCi/l | 0.588 |
| Jun 10 1993 | 4.200 pCi/l | 1.435 |
| Aug 31 1993 | 3.000 pCi/l | 1.099 |
| Nov 02 1993 | 1.500 pCi/l | 0.405 |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 0

| | | | |
|------------|--------------|---------------|-------|
| Minimum: | 1.500 pCi/l | Ln Minimum: | 0.405 |
| Maximum: | 12.300 pCi/l | Ln Maximum: | 2.510 |
| Mean: | 4.488 pCi/l | Ln Mean: | 1.302 |
| Std. Dev.: | 3.401 pCi/l | Ln Std. Dev.: | 0.654 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-------|
| Mar 30 1992 | 7.600 pCi/l | 2.028 |
| Jun 23 1992 | 3.200 pCi/l | 1.163 |
| Aug 05 1992 | 2.300 pCi/l | 0.833 |
| Dec 03 1992 | 3.700 pCi/l | 1.308 |
| Mar 09 1993 | 3.800 pCi/l | 1.335 |
| Jun 10 1993 | 2.300 pCi/l | 0.833 |
| Aug 31 1993 | 3.500 pCi/l | 1.253 |
| Nov 02 1993 | 2.300 pCi/l | 0.833 |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 0

| | | | |
|------------|-------------|---------------|-------|
| Minimum: | 2.300 pCi/l | Ln Minimum: | 0.833 |
| Maximum: | 7.600 pCi/l | Ln Maximum: | 2.028 |
| Mean: | 3.588 pCi/l | Ln Mean: | 1.198 |
| Std. Dev.: | 1.744 pCi/l | Ln Std. Dev.: | 0.401 |

Data Set Summary
Report Printed: 05-30-1995 10:57

Facility:RAAP Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford ST:VA Zip:24141
County:MONTGOMERY

Contact:Jerry Redder
Phone:(703) 639-7536

Permit Type:Detection

Constituent:As Arsenic, total

CAS Number: 7440-38-2

MCL: 50.000 ppb
ACL: 0.000 ppb
Detect Limit: 2.000 ppb

Start Date:Mar 30 1992
End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln | |
|-------------|-------------|-------|-----------------|
| Mar 30 1992 | 1.000 ppb | 0.000 | (* Nondetect *) |
| Jun 23 1992 | 1.000 ppb | 0.000 | (* Nondetect *) |
| Aug 05 1992 | 6.000 ppb | 1.792 | |
| Dec 03 1992 | 1.000 ppb | 0.000 | (* Nondetect *) |
| Mar 09 1993 | 1.000 ppb | 0.000 | (* Nondetect *) |
| Jun 10 1993 | 1.000 ppb | 0.000 | (* Nondetect *) |
| Aug 31 1993 | 1.000 ppb | 0.000 | (* Nondetect *) |
| Nov 02 1993 | 1.000 ppb | 0.000 | (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8
Nondetects (%ND): 88

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.000 ppb | Ln Minimum: | 0.000 |
| Maximum: | 6.000 ppb | Ln Maximum: | 1.792 |
| Mean: | 1.625 ppb | Ln Mean: | 0.224 |
| Std. Dev.: | 1.768 ppb | Ln Std. Dev.: | 0.633 |

Well ID:10MW1

| Sample Date | Observation | Ln |
|-------------|-------------|----|
|-------------|-------------|----|

| | | |
|-------------|-----------|-----------------------|
| Mar 30 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 23 1992 | 2.000 ppb | 0.693 |
| Aug 05 1992 | 3.000 ppb | 1.099 |
| Dec 03 1992 | 3.000 ppb | 1.099 |
| Mar 09 1993 | 3.000 ppb | 1.099 |
| Jun 10 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 31 1993 | 2.000 ppb | 0.693 |
| Nov 02 1993 | 3.000 ppb | 1.099 |

Well ID:10MW1 Summary Statistics

Observations (N): 8

Nondetects (%ND): 25

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.000 ppb | Ln Minimum: | 0.000 |
| Maximum: | 3.000 ppb | Ln Maximum: | 1.099 |
| Mean: | 2.250 ppb | Ln Mean: | 0.723 |
| Std. Dev.: | 0.886 ppb | Ln Std. Dev.: | 0.480 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 23 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 05 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Dec 03 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 31 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Nov 02 1993 | 1.000 ppb | 0.000 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N): 8

Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.000 ppb | Ln Minimum: | 0.000 |
| Maximum: | 1.000 ppb | Ln Maximum: | 0.000 |
| Mean: | 1.000 ppb | Ln Mean: | 0.000 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 23 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 05 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Dec 03 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 31 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Nov 02 1993 | 1.000 ppb | 0.000 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) :100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.000 ppb | Ln Minimum: | 0.000 |
| Maximum: | 1.000 ppb | Ln Maximum: | 0.000 |
| Mean: | 1.000 ppb | Ln Mean: | 0.000 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 23 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 05 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Dec 03 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 31 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Nov 02 1993 | 1.000 ppb | 0.000 (* Nondetect *) |

Well ID:DDH2 Summary Statistics

Observations (N) : 8
Nondetects (%ND) :100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.000 ppb | Ln Minimum: | 0.000 |
| Maximum: | 1.000 ppb | Ln Maximum: | 0.000 |
| Mean: | 1.000 ppb | Ln Mean: | 0.000 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Data Set Summary

Report Printed: 05-30-1995 11:02

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:As dis Arsenic, dissolved

CAS Number: 7440-38-2

MCL: 50.000 ppb

ACL: 0.000 ppb

Detect Limit: 2.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 23 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 05 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Dec 03 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 31 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Nov 02 1993 | 1.000 ppb | 0.000 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND):100

| | |
|------------|-----------|
| Minimum: | 1.000 ppb |
| Maximum: | 1.000 ppb |
| Mean: | 1.000 ppb |
| Std. Dev.: | 0.000 ppb |

| | |
|---------------|-------|
| Ln Minimum: | 0.000 |
| Ln Maximum: | 0.000 |
| Ln Mean: | 0.000 |
| Ln Std. Dev.: | 0.000 |

Well ID:10MW1

Sample Date Observation

Ln

| | | ppb | Ln | |
|-------------|-------|-----|-------|-----------------|
| Jun 23 1992 | 1.000 | ppb | 0.000 | (* Nondetect *) |
| Aug 05 1992 | 1.000 | ppb | 0.000 | (* Nondetect *) |
| Dec 03 1992 | 4.000 | ppb | 1.386 | |
| Mar 09 1993 | 2.000 | ppb | 0.693 | |
| Jun 10 1993 | 1.000 | ppb | 0.000 | (* Nondetect *) |
| Aug 31 1993 | 2.000 | ppb | 0.693 | |
| Nov 02 1993 | 3.000 | ppb | 1.099 | |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 50

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.000 ppb | Ln Minimum: | 0.000 |
| Maximum: | 4.000 ppb | Ln Maximum: | 1.386 |
| Mean: | 1.875 ppb | Ln Mean: | 0.484 |
| Std. Dev.: | 1.126 ppb | Ln Std. Dev.: | 0.563 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 23 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 05 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Dec 03 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 31 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Nov 02 1993 | 1.000 ppb | 0.000 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.000 ppb | Ln Minimum: | 0.000 |
| Maximum: | 1.000 ppb | Ln Maximum: | 0.000 |
| Mean: | 1.000 ppb | Ln Mean: | 0.000 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 23 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 05 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Dec 03 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 31 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Nov 02 1993 | 1.000 ppb | 0.000 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.000 ppb | Ln Minimum: | 0.000 |
| Maximum: | 1.000 ppb | Ln Maximum: | 0.000 |
| Mean: | 1.000 ppb | Ln Mean: | 0.000 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 23 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 05 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Dec 03 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Aug 31 1993 | 1.000 ppb | 0.000 (* Nondetect *) |
| Nov 02 1993 | 1.000 ppb | 0.000 (* Nondetect *) |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.000 ppb | Ln Minimum: | 0.000 |
| Maximum: | 1.000 ppb | Ln Maximum: | 0.000 |
| Mean: | 1.000 ppb | Ln Mean: | 0.000 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Data Set Summary
Report Printed: 05-30-1995 11:03

Facility:RAAP Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford ST:VA Zip:24141
County:MONTGOMERY

Contact:Jerry Redder
Phone:(703) 639-7536

Permit Type:Detection

Constituent:BHC-D BHC, gamma

CAS Number: 58-89-9

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 0.040 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Jun 23 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Aug 05 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Dec 03 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Mar 09 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Jun 10 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Aug 31 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Nov 02 1993 | 0.020 ppb | -3.912 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8
Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.020 ppb | Ln Minimum: | -3.912 |
| Maximum: | 0.020 ppb | Ln Maximum: | -3.912 |
| Mean: | 0.020 ppb | Ln Mean: | -3.912 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:10MW1

| Sample Date | Observation | Ln |
|-------------|-------------|----|
|-------------|-------------|----|

| | | |
|-------------|-----------|------------------------|
| Mar 30 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Jun 23 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Aug 05 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Dec 03 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Mar 09 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Jun 10 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Aug 31 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Nov 02 1993 | 0.020 ppb | -3.912 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.020 ppb | Ln Minimum: | -3.912 |
| Maximum: | 0.020 ppb | Ln Maximum: | -3.912 |
| Mean: | 0.020 ppb | Ln Mean: | -3.912 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Jun 23 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Aug 05 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Dec 03 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Mar 09 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Jun 10 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Aug 31 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Nov 02 1993 | 0.020 ppb | -3.912 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.020 ppb | Ln Minimum: | -3.912 |
| Maximum: | 0.020 ppb | Ln Maximum: | -3.912 |
| Mean: | 0.020 ppb | Ln Mean: | -3.912 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Jun 23 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Aug 05 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Dec 03 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Mar 09 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Jun 10 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Aug 31 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Nov 02 1993 | 0.020 ppb | -3.912 (* Nondetect *) |

Well ID:D3D Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.020 ppb | Ln Minimum: | -3.912 |
| Maximum: | 0.020 ppb | Ln Maximum: | -3.912 |
| Mean: | 0.020 ppb | Ln Mean: | -3.912 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Jun 23 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Aug 05 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Dec 03 1992 | 0.020 ppb | -3.912 (* Nondetect *) |
| Mar 09 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Jun 10 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Aug 31 1993 | 0.020 ppb | -3.912 (* Nondetect *) |
| Nov 02 1993 | 0.020 ppb | -3.912 (* Nondetect *) |

Well ID:DDH2 Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.020 ppb | Ln Minimum: | -3.912 |
| Maximum: | 0.020 ppb | Ln Maximum: | -3.912 |
| Mean: | 0.020 ppb | Ln Mean: | -3.912 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Data Set Summary
Report Printed: 05-30-1995 11:04

Facility:RAAP Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford ST:VA Zip:24141
County:MONTGOMERY

Contact:Jerry Redder
Phone:(703) 639-7536

Permit Type:Detection

Constituent:Ba Barium, total

CAS Number: 7440-39-3

MCL: 1000.000 ppb

ACL: 0.000 ppb

Detect Limit: 2.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

11 ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|-------|
| Mar 30 1992 | 97.000 ppb | 4.575 |
| Jun 23 1992 | 106.000 ppb | 4.663 |
| Aug 05 1992 | 253.000 ppb | 5.533 |
| Dec 03 1992 | 97.000 ppb | 4.575 |
| Mar 09 1993 | 126.000 ppb | 4.836 |
| Jun 10 1993 | 95.000 ppb | 4.554 |
| Aug 31 1993 | 167.000 ppb | 5.118 |
| Nov 02 1993 | 106.000 ppb | 4.663 |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 0

Minimum: 95.000 ppb
Maximum: 253.000 ppb
Mean: 130.875 ppb
Std. Dev.: 54.854 ppb

Ln Minimum: 4.554
Ln Maximum: 5.533
Ln Mean: 4.815
Ln Std. Dev.: 0.346

Well ID:10MW1

| Sample Date | Observation | Ln |
|-------------|-------------|----|
|-------------|-------------|----|

| | | | |
|-------------|---------|-----|-------|
| | 159.000 | ppb | 4.934 |
| Jun 23 1992 | 129.000 | ppb | 4.860 |
| Aug 05 1992 | 222.000 | ppb | 5.403 |
| Dec 03 1992 | 79.000 | ppb | 4.369 |
| Mar 09 1993 | 71.000 | ppb | 4.263 |
| Jun 10 1993 | 88.000 | ppb | 4.477 |
| Aug 31 1993 | 78.000 | ppb | 4.357 |
| Nov 02 1993 | 82.000 | ppb | 4.407 |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 0

| | | | | |
|------------|---------|-----|---------------|-------|
| Minimum: | 71.000 | ppb | Ln Minimum: | 4.263 |
| Maximum: | 222.000 | ppb | Ln Maximum: | 5.403 |
| Mean: | 111.000 | ppb | Ln Mean: | 4.634 |
| Std. Dev.: | 51.425 | ppb | Ln Std. Dev.: | 0.395 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|-------|
| Mar 30 1992 | 30.000 ppb | 3.401 |
| Jun 23 1992 | 35.000 ppb | 3.555 |
| Aug 05 1992 | 30.000 ppb | 3.401 |
| Dec 03 1992 | 25.000 ppb | 3.219 |
| Mar 09 1993 | 31.000 ppb | 3.434 |
| Jun 10 1993 | 26.000 ppb | 3.258 |
| Aug 31 1993 | 29.000 ppb | 3.367 |
| Nov 02 1993 | 31.000 ppb | 3.434 |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 0

| | | | | |
|------------|--------|-----|---------------|-------|
| Minimum: | 25.000 | ppb | Ln Minimum: | 3.219 |
| Maximum: | 35.000 | ppb | Ln Maximum: | 3.555 |
| Mean: | 29.625 | ppb | Ln Mean: | 3.384 |
| Std. Dev.: | 3.114 | ppb | Ln Std. Dev.: | 0.106 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 38.000 ppb | 3.638 |
| Jun 23 1992 | 45.000 ppb | 3.807 |
| Aug 05 1992 | 40.000 ppb | 3.689 |
| Dec 03 1992 | 1.000 ppb | 0.000 (* Nondetect *) |
| Mar 09 1993 | 34.000 ppb | 3.526 |
| Jun 10 1993 | 38.000 ppb | 3.638 |
| Aug 31 1993 | 34.000 ppb | 3.526 |
| Nov 02 1993 | 36.000 ppb | 3.584 |

Well ID:D3D Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 13

| | | | |
|------------|------------|---------------|-------|
| Minimum: | 1.000 ppb | Ln Minimum: | 0.000 |
| Maximum: | 45.000 ppb | Ln Maximum: | 3.807 |
| Mean: | 33.250 ppb | Ln Mean: | 3.176 |
| Std. Dev.: | 13.509 ppb | Ln Std. Dev.: | 1.286 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-------|
| Mar 30 1992 | 28.000 ppb | 3.332 |
| Jun 23 1992 | 52.000 ppb | 3.951 |
| Aug 05 1992 | 142.000 ppb | 4.956 |
| Dec 03 1992 | 50.000 ppb | 3.912 |
| Mar 09 1993 | 46.000 ppb | 3.829 |
| Jun 10 1993 | 49.000 ppb | 3.892 |
| Aug 31 1993 | 37.000 ppb | 3.611 |
| Nov 02 1993 | 30.000 ppb | 3.401 |

Well ID:DDH2 Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 0

| | | | |
|------------|-------------|---------------|-------|
| Minimum: | 28.000 ppb | Ln Minimum: | 3.332 |
| Maximum: | 142.000 ppb | Ln Maximum: | 4.956 |
| Mean: | 54.250 ppb | Ln Mean: | 3.860 |
| Std. Dev.: | 36.632 ppb | Ln Std. Dev.: | 0.502 |

Data Set Summary

Report Printed: 05-30-1995 11:05

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:Ba dis Barium, dissolved

CAS Number: 7440-39-3

MCL: 1000.000 ppb

ACL: 0.000 ppb

Detect Limit: 2.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|-------|
| Mar 30 1992 | 116.000 ppb | 4.754 |
| Jun 23 1992 | 94.000 ppb | 4.543 |
| Aug 05 1992 | 93.000 ppb | 4.533 |
| Dec 03 1992 | 121.000 ppb | 4.796 |
| Mar 09 1993 | 114.000 ppb | 4.736 |
| Jun 10 1993 | 105.000 ppb | 4.654 |
| Aug 31 1993 | 154.000 ppb | 5.037 |
| Nov 02 1993 | 137.000 ppb | 4.920 |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 0

| | |
|------------|-------------|
| Minimum: | 93.000 ppb |
| Maximum: | 154.000 ppb |
| Mean: | 116.750 ppb |
| Std. Dev.: | 20.852 ppb |

| | |
|---------------|-------|
| Ln Minimum: | 4.533 |
| Ln Maximum: | 5.037 |
| Ln Mean: | 4.747 |
| Ln Std. Dev.: | 0.174 |

Well ID:10MW1

Sample Date Observation

Ln

| | | | |
|-------------|---------|-----|-------|
| Mar 30 1992 | 118.000 | ppb | 4.771 |
| Jun 23 1992 | 97.000 | ppb | 4.575 |
| Aug 05 1992 | 122.000 | ppb | 4.804 |
| Dec 03 1992 | 82.000 | ppb | 4.407 |
| Mar 09 1993 | 77.000 | ppb | 4.344 |
| Jun 10 1993 | 85.000 | ppb | 4.443 |
| Aug 31 1993 | 113.000 | ppb | 4.727 |
| Nov 02 1993 | 109.000 | ppb | 4.691 |

Well ID:10MW1 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 0

| | | | | |
|------------|---------|-----|---------------|-------|
| Minimum: | 77.000 | ppb | Ln Minimum: | 4.344 |
| Maximum: | 122.000 | ppb | Ln Maximum: | 4.804 |
| Mean: | 100.375 | ppb | Ln Mean: | 4.595 |
| Std. Dev.: | 17.501 | ppb | Ln Std. Dev.: | 0.179 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|-------|
| Mar 30 1992 | 39.000 ppb | 3.664 |
| Jun 23 1992 | 30.000 ppb | 3.401 |
| Aug 05 1992 | 38.000 ppb | 3.638 |
| Dec 03 1992 | 41.000 ppb | 3.714 |
| Mar 09 1993 | 29.000 ppb | 3.367 |
| Jun 10 1993 | 30.000 ppb | 3.401 |
| Aug 31 1993 | 66.000 ppb | 4.190 |
| Nov 02 1993 | 64.000 ppb | 4.159 |

Well ID:D3 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 0

| | | | | |
|------------|--------|-----|---------------|-------|
| Minimum: | 29.000 | ppb | Ln Minimum: | 3.367 |
| Maximum: | 66.000 | ppb | Ln Maximum: | 4.190 |
| Mean: | 42.125 | ppb | Ln Mean: | 3.692 |
| Std. Dev.: | 14.846 | ppb | Ln Std. Dev.: | 0.326 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|-------|
| Mar 30 1992 | 46.000 ppb | 3.829 |
| Jun 23 1992 | 40.000 ppb | 3.689 |
| Aug 05 1992 | 46.000 ppb | 3.829 |
| Dec 03 1992 | 24.000 ppb | 3.178 |
| Mar 09 1993 | 38.000 ppb | 3.638 |
| Jun 10 1993 | 37.000 ppb | 3.611 |
| Aug 31 1993 | 55.000 ppb | 4.007 |
| Nov 02 1993 | 65.000 ppb | 4.174 |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 0

| | | | |
|------------|------------|---------------|-------|
| Minimum: | 24.000 ppb | Ln Minimum: | 3.178 |
| Maximum: | 65.000 ppb | Ln Maximum: | 4.174 |
| Mean: | 43.875 ppb | Ln Mean: | 3.744 |
| Std. Dev.: | 12.369 ppb | Ln Std. Dev.: | 0.298 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-------|
| Mar 30 1992 | 31.000 ppb | 3.434 |
| Jun 23 1992 | 43.000 ppb | 3.761 |
| Aug 05 1992 | 48.000 ppb | 3.871 |
| Dec 03 1992 | 84.000 ppb | 4.431 |
| Mar 09 1993 | 47.000 ppb | 3.850 |
| Jun 10 1993 | 52.000 ppb | 3.951 |
| Aug 31 1993 | 66.000 ppb | 4.190 |
| Nov 02 1993 | 59.000 ppb | 4.078 |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 0

| | | | |
|------------|------------|---------------|-------|
| Minimum: | 31.000 ppb | Ln Minimum: | 3.434 |
| Maximum: | 84.000 ppb | Ln Maximum: | 4.431 |
| Mean: | 53.750 ppb | Ln Mean: | 3.946 |
| Std. Dev.: | 16.069 ppb | Ln Std. Dev.: | 0.298 |

Data Set Summary
Report Printed: 05-30-1995 11:06

Facility:RAAP Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford ST:VA Zip:24141
County:MONTGOMERY

Contact:Jerry Redder
Phone:(703) 639-7536

Permit Type:Detection

Constituent:Beta Beta emission, total

CAS Number:12587-47-2

MCL: 0.000 pCi/l

ACL: 0.000 pCi/l

Detect Limit: 1.000 pCi/l

Start Date:Mar 30 1992

End Date:Nov 02 1993

11 ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|-------|
| Mar 30 1992 | 4.000 pCi/l | 1.386 |
| Jun 23 1992 | 2.500 pCi/l | 0.916 |
| Aug 05 1992 | 8.500 pCi/l | 2.140 |
| Dec 03 1992 | 2.700 pCi/l | 0.993 |
| Mar 09 1993 | 2.400 pCi/l | 0.875 |
| Jun 10 1993 | 3.700 pCi/l | 1.308 |
| Aug 31 1993 | 2.400 pCi/l | 0.875 |
| Nov 02 1993 | 1.400 pCi/l | 0.336 |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 0

| | | | |
|------------|-------------|---------------|-------|
| Minimum: | 1.400 pCi/l | Ln Minimum: | 0.336 |
| Maximum: | 8.500 pCi/l | Ln Maximum: | 2.140 |
| Mean: | 3.450 pCi/l | Ln Mean: | 1.104 |
| Std. Dev.: | 2.195 pCi/l | Ln Std. Dev.: | 0.526 |

well ID:10MW1

Sample Date Observation Ln

| | | |
|-------------|--------------|-------|
| Mar 30 1992 | 16.200 pCi/l | 2.785 |
| Jun 23 1992 | 6.200 pCi/l | 1.825 |
| Aug 05 1992 | 3.100 pCi/l | 1.131 |
| Dec 03 1992 | 4.300 pCi/l | 1.459 |
| Mar 09 1993 | 2.400 pCi/l | 0.875 |
| Jun 10 1993 | 2.700 pCi/l | 0.993 |
| Aug 31 1993 | 2.700 pCi/l | 0.993 |
| Nov 02 1993 | 2.800 pCi/l | 1.030 |

Well ID:10MW1 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 0

| | | | |
|------------|--------------|---------------|-------|
| Minimum: | 2.400 pCi/l | Ln Minimum: | 0.875 |
| Maximum: | 16.200 pCi/l | Ln Maximum: | 2.785 |
| Mean: | 5.050 pCi/l | Ln Mean: | 1.386 |
| Std. Dev.: | 4.677 pCi/l | Ln Std. Dev.: | 0.645 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|--------------|-------|
| Mar 30 1992 | 22.900 pCi/l | 3.131 |
| Jun 23 1992 | 4.100 pCi/l | 1.411 |
| Aug 05 1992 | 2.000 pCi/l | 0.693 |
| Dec 03 1992 | 5.000 pCi/l | 1.609 |
| Mar 09 1993 | 2.300 pCi/l | 0.833 |
| Jun 10 1993 | 1.500 pCi/l | 0.405 |
| Aug 31 1993 | 3.200 pCi/l | 1.163 |
| Nov 02 1993 | 2.400 pCi/l | 0.875 |

Well ID:D3 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 0

| | | | |
|------------|--------------|---------------|-------|
| Minimum: | 1.500 pCi/l | Ln Minimum: | 0.405 |
| Maximum: | 22.900 pCi/l | Ln Maximum: | 3.131 |
| Mean: | 5.425 pCi/l | Ln Mean: | 1.265 |
| Std. Dev.: | 7.155 pCi/l | Ln Std. Dev.: | 0.848 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|--------------|-------|
| Mar 30 1992 | 16.800 pCi/l | 2.821 |
| Jun 23 1992 | 3.600 pCi/l | 1.281 |
| Aug 05 1992 | 3.800 pCi/l | 1.335 |
| Dec 03 1992 | 5.000 pCi/l | 1.609 |
| Mar 09 1993 | 4.500 pCi/l | 1.504 |
| Jun 10 1993 | 4.900 pCi/l | 1.589 |
| Aug 31 1993 | 3.100 pCi/l | 1.131 |
| Nov 02 1993 | 1.700 pCi/l | 0.531 |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 0

| | | | |
|------------|--------------|---------------|-------|
| Minimum: | 1.700 pCi/l | Ln Minimum: | 0.531 |
| Maximum: | 16.800 pCi/l | Ln Maximum: | 2.821 |
| Mean: | 5.425 pCi/l | Ln Mean: | 1.475 |
| Std. Dev.: | 4.720 pCi/l | Ln Std. Dev.: | 0.645 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-------|
| Mar 30 1992 | 9.400 pCi/l | 2.241 |
| Jun 23 1992 | 3.800 pCi/l | 1.335 |
| Aug 05 1992 | 5.000 pCi/l | 1.609 |
| Dec 03 1992 | 6.300 pCi/l | 1.841 |
| Mar 09 1993 | 3.800 pCi/l | 1.335 |
| Jun 10 1993 | 2.700 pCi/l | 0.993 |
| Aug 31 1993 | 4.000 pCi/l | 1.386 |
| Nov 02 1993 | 2.500 pCi/l | 0.916 |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 0

| | | | |
|------------|-------------|---------------|-------|
| Minimum: | 2.500 pCi/l | Ln Minimum: | 0.916 |
| Maximum: | 9.400 pCi/l | Ln Maximum: | 2.241 |
| Mean: | 4.688 pCi/l | Ln Mean: | 1.457 |
| Std. Dev.: | 2.258 pCi/l | Ln Std. Dev.: | 0.435 |

Data Set Summary

Report Printed: 05-30-1995 12:43

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:Cd Cadmium, total

CAS Number: 7440-43-9

MCL: 10.000 ppb

ACL: 0.000 ppb

Detect Limit: 0.100 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.200 ppb | -1.609 |
| Jun 23 1992 | 0.300 ppb | -1.204 |
| Aug 05 1992 | 0.500 ppb | -0.693 |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.300 ppb | -1.204 |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 50

| | |
|------------|-----------|
| Minimum: | 0.050 ppb |
| Maximum: | 0.500 ppb |
| Mean: | 0.188 ppb |
| Std. Dev.: | 0.169 ppb |

| | |
|---------------|--------|
| Ln Minimum: | -2.996 |
| Ln Maximum: | -0.693 |
| Ln Mean: | -2.087 |
| Ln Std. Dev.: | 1.002 |

Well ID:10MW1

Sample Date Observation Ln

| | | |
|-------------|-----------|------------------------|
| Mar 30 1992 | 0.200 ppb | -1.609 |
| Jun 23 1992 | 0.200 ppb | -1.609 |
| Aug 05 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.300 ppb | -1.204 |
| Nov 02 1993 | 0.300 ppb | -1.204 |

Well ID:10MW1 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 50

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.300 ppb | Ln Maximum: | -1.204 |
| Mean: | 0.150 ppb | Ln Mean: | -2.201 |
| Std. Dev.: | 0.113 ppb | Ln Std. Dev.: | 0.863 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.200 ppb | -1.609 |
| Jun 23 1992 | 0.200 ppb | -1.609 |
| Aug 05 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.200 ppb | -1.609 |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 63

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.200 ppb | Ln Maximum: | -1.609 |
| Mean: | 0.106 ppb | Ln Mean: | -2.476 |
| Std. Dev.: | 0.078 ppb | Ln Std. Dev.: | 0.717 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.200 ppb | -1.609 |
| Jun 23 1992 | 0.100 ppb | -2.303 |
| Aug 05 1992 | 0.200 ppb | -1.609 |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.200 ppb | -1.609 |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 50

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.200 ppb | Ln Maximum: | -1.609 |
| Mean: | 0.112 ppb | Ln Mean: | -2.389 |
| Std. Dev.: | 0.074 ppb | Ln Std. Dev.: | 0.687 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.200 ppb | -1.609 |
| Jun 23 1992 | 0.200 ppb | -1.609 |
| Aug 05 1992 | 0.800 ppb | -0.223 |
| Dec 03 1992 | 1.700 ppb | 0.531 |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.300 ppb | -1.204 |
| Nov 02 1993 | 0.100 ppb | -2.303 |

Well ID:DDH2 Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 25

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 1.700 ppb | Ln Maximum: | 0.531 |
| Mean: | 0.425 ppb | Ln Mean: | -1.551 |
| Std. Dev.: | 0.569 ppb | Ln Std. Dev.: | 1.251 |

Data Set Summary

Report Printed: 05-30-1995 11:09

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:Cd dis Cadmium, dissolved

CAS Number: 7440-43-9

MCL: 10.000 ppb

ACL: 0.000 ppb

Detect Limit: 0.100 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 23 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 05 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Dec 03 1992 | 0.100 ppb | -2.303 |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.200 ppb | -1.609 |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:D4

Summary Statistics

Observations (N) : 8

Nondetects (%ND) : 75

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.200 ppb | Ln Maximum: | -1.609 |
| Mean: | 0.075 ppb | Ln Mean: | -2.736 |
| Std. Dev.: | 0.053 ppb | Ln Std. Dev.: | 0.516 |

Well ID:10MW1

Sample Date Observation

Ln

| | | |
|-------------|-----------|------------------------|
| Mar 30 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 23 1992 | 0.200 ppb | -1.609 |
| Aug 05 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 88

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.200 ppb | Ln Maximum: | -1.609 |
| Mean: | 0.069 ppb | Ln Mean: | -2.822 |
| Std. Dev.: | 0.053 ppb | Ln Std. Dev.: | 0.490 |

Well ID:D3 Summary Statistics

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 23 1992 | 0.100 ppb | -2.303 |
| Aug 05 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.400 ppb | -0.916 |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 75

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.400 ppb | Ln Maximum: | -0.916 |
| Mean: | 0.100 ppb | Ln Mean: | -2.649 |
| Std. Dev.: | 0.122 ppb | Ln Std. Dev.: | 0.741 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 23 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 05 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.100 ppb | -2.303 |
| Nov 02 1993 | 0.100 ppb | -2.303 |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 75

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.100 ppb | Ln Maximum: | -2.303 |
| Mean: | 0.063 ppb | Ln Mean: | -2.822 |
| Std. Dev.: | 0.023 ppb | Ln Std. Dev.: | 0.321 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 23 1992 | 0.100 ppb | -2.303 |
| Aug 05 1992 | 0.100 ppb | -2.303 |
| Dec 03 1992 | 0.050 ppb | -2.996 (* Nondetect *) |
| Mar 09 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Jun 10 1993 | 0.050 ppb | -2.996 (* Nondetect *) |
| Aug 31 1993 | 0.200 ppb | -1.609 |
| Nov 02 1993 | 0.050 ppb | -2.996 (* Nondetect *) |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 63

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.050 ppb | Ln Minimum: | -2.996 |
| Maximum: | 0.200 ppb | Ln Maximum: | -1.609 |
| Mean: | 0.081 ppb | Ln Mean: | -2.649 |
| Std. Dev.: | 0.053 ppb | Ln Std. Dev.: | 0.524 |

Data Set Summary

Report Printed: 05-30-1995 11:11

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:Chld Chloride

CAS Number:16887-00-6

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 1000.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|---------------|--------|
| Mar 30 1992 | 30000.000 ppb | 10.309 |
| Jun 23 1992 | 20000.000 ppb | 9.903 |
| Aug 05 1992 | 19000.000 ppb | 9.852 |
| Dec 03 1992 | 15000.000 ppb | 9.616 |
| Mar 09 1993 | 26000.000 ppb | 10.166 |
| Jun 10 1993 | 16000.000 ppb | 9.680 |
| Aug 31 1993 | 24000.000 ppb | 10.086 |
| Nov 02 1993 | 11000.000 ppb | 9.306 |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 0

| | | | |
|------------|---------------|---------------|--------|
| Minimum: | 11000.000 ppb | Ln Minimum: | 9.306 |
| Maximum: | 30000.000 ppb | Ln Maximum: | 10.309 |
| Mean: | 20125.000 ppb | Ln Mean: | 9.865 |
| Std. Dev.: | 6266.407 ppb | Ln Std. Dev.: | 0.327 |

Well ID:10MW1

Sample Date Observation Ln

| | | | |
|-------------|-----------|-----|-------|
| Mar 30 1992 | 18000.000 | ppb | 9.798 |
| Jun 23 1992 | 16000.000 | ppb | 9.680 |
| Aug 05 1992 | 18000.000 | ppb | 9.798 |
| Dec 03 1992 | 18000.000 | ppb | 9.798 |
| Mar 09 1993 | 12000.000 | ppb | 9.393 |
| Jun 10 1993 | 12000.000 | ppb | 9.393 |
| Aug 31 1993 | 8000.000 | ppb | 8.987 |
| Nov 02 1993 | 11000.000 | ppb | 9.306 |

Well ID:10MW1 Summary Statistics

Observations (N) : 8

Nondetects (%ND) : 0

| | | | | |
|------------|-----------|-----|---------------|-------|
| Minimum: | 8000.000 | ppb | Ln Minimum: | 8.987 |
| Maximum: | 18000.000 | ppb | Ln Maximum: | 9.798 |
| Mean: | 14125.000 | ppb | Ln Mean: | 9.519 |
| Std. Dev.: | 3870.677 | ppb | Ln Std. Dev.: | 0.298 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|---------------|--------|
| Mar 30 1992 | 30000.000 ppb | 10.309 |
| Jun 23 1992 | 40000.000 ppb | 10.597 |
| Aug 05 1992 | 20000.000 ppb | 9.903 |
| Dec 03 1992 | 30000.000 ppb | 10.309 |
| Mar 09 1993 | 26000.000 ppb | 10.166 |
| Jun 10 1993 | 19000.000 ppb | 9.852 |
| Aug 31 1993 | 17000.000 ppb | 9.741 |
| Nov 02 1993 | 21000.000 ppb | 9.952 |

Well ID:D3 Summary Statistics

Observations (N) : 8

Nondetects (%ND) : 0

| | | | | |
|------------|-----------|-----|---------------|--------|
| Minimum: | 17000.000 | ppb | Ln Minimum: | 9.741 |
| Maximum: | 40000.000 | ppb | Ln Maximum: | 10.597 |
| Mean: | 25375.000 | ppb | Ln Mean: | 10.104 |
| Std. Dev.: | 7707.834 | ppb | Ln Std. Dev.: | 0.290 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|---------------|--------|
| Mar 30 1992 | 20000.000 ppb | 9.903 |
| Jun 23 1992 | 30000.000 ppb | 10.309 |
| Aug 05 1992 | 20000.000 ppb | 9.903 |
| Dec 03 1992 | 20000.000 ppb | 9.903 |
| Mar 09 1993 | 19000.000 ppb | 9.852 |
| Jun 10 1993 | 19000.000 ppb | 9.852 |
| Aug 31 1993 | 20000.000 ppb | 9.903 |
| Nov 02 1993 | 21000.000 ppb | 9.952 |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 0

| | | | |
|------------|---------------|---------------|--------|
| Minimum: | 19000.000 ppb | Ln Minimum: | 9.852 |
| Maximum: | 30000.000 ppb | Ln Maximum: | 10.309 |
| Mean: | 21125.000 ppb | Ln Mean: | 9.947 |
| Std. Dev.: | 3642.507 ppb | Ln Std. Dev.: | 0.150 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|---------------|--------|
| Mar 30 1992 | 30000.000 ppb | 10.309 |
| Jun 23 1992 | 30000.000 ppb | 10.309 |
| Aug 05 1992 | 20000.000 ppb | 9.903 |
| Dec 03 1992 | 60000.000 ppb | 11.002 |
| Mar 09 1993 | 26000.000 ppb | 10.166 |
| Jun 10 1993 | 19000.000 ppb | 9.852 |
| Aug 31 1993 | 13000.000 ppb | 9.473 |
| Nov 02 1993 | 21000.000 ppb | 9.952 |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 0

| | | | |
|------------|---------------|---------------|--------|
| Minimum: | 13000.000 ppb | Ln Minimum: | 9.473 |
| Maximum: | 60000.000 ppb | Ln Maximum: | 11.002 |
| Mean: | 27375.000 ppb | Ln Mean: | 10.121 |
| Std. Dev.: | 14401.762 ppb | Ln Std. Dev.: | 0.450 |

Data Set Summary

Report Printed: 05-30-1995 12:54

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:(* No Permit Type Specified *)

Constituent:Chlorofm Chloroform

CAS Number: 67-66-3

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 0.500 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

11 ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 2.100 ppb | 0.742 |
| Jun 23 1992 | 0.700 ppb | -0.357 |
| Aug 05 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Dec 03 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Mar 09 1993 | 1.300 ppb | 0.262 |
| Jun 10 1993 | 1.800 ppb | 0.588 |
| Aug 31 1993 | 2.800 ppb | 1.030 |
| Nov 02 1993 | 4.600 ppb | 1.526 |

Well ID:D4

Summary Statistics

Observations (N) : 8

Nondetects (%ND) : 25

| | |
|------------|-----------|
| Minimum: | 0.250 ppb |
| Maximum: | 4.600 ppb |
| Mean: | 1.725 ppb |
| Std. Dev.: | 1.471 ppb |

| | |
|---------------|--------|
| Ln Minimum: | -1.386 |
| Ln Maximum: | 1.526 |
| Ln Mean: | 0.127 |
| Ln Std. Dev.: | 1.082 |

Well ID:10MW1

Sample Date Observation

Ln

| | | | | |
|-------------|---------|-----|--------|-----------------|
| Mar 30 1992 | 0.250 | ppb | -1.386 | (* Nondetect *) |
| Jun 23 1992 | 0.250 | ppb | -1.386 | (* Nondetect *) |
| Aug 05 1992 | 0.250 | ppb | -1.386 | (* Nondetect *) |
| Dec 03 1992 | 127.900 | ppb | 4.851 | |
| Mar 09 1993 | 2.800 | ppb | 1.030 | |
| Jun 10 1993 | 0.250 | ppb | -1.386 | (* Nondetect *) |
| Aug 31 1993 | 0.250 | ppb | -1.386 | (* Nondetect *) |
| Nov 02 1993 | 0.250 | ppb | -1.386 | (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 75

| | | |
|------------|---------|-----|
| Minimum: | 0.250 | ppb |
| Maximum: | 127.900 | ppb |
| Mean: | 16.525 | ppb |
| Std. Dev.: | 45.011 | ppb |

| | |
|---------------|--------|
| Ln Minimum: | -1.386 |
| Ln Maximum: | 4.851 |
| Ln Mean: | -0.305 |
| Ln Std. Dev.: | 2.248 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Jun 23 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Aug 05 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Dec 03 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Mar 09 1993 | 0.250 ppb | -1.386 (* Nondetect *) |
| Jun 10 1993 | 0.250 ppb | -1.386 (* Nondetect *) |
| Aug 31 1993 | 0.250 ppb | -1.386 (* Nondetect *) |
| Nov 02 1993 | 2.200 ppb | 0.788 |

Well ID:D3 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 88

| | | |
|------------|-------|-----|
| Minimum: | 0.250 | ppb |
| Maximum: | 2.200 | ppb |
| Mean: | 0.494 | ppb |
| Std. Dev.: | 0.689 | ppb |

| | |
|---------------|--------|
| Ln Minimum: | -1.386 |
| Ln Maximum: | 0.788 |
| Ln Mean: | -1.114 |
| Ln Std. Dev.: | 0.769 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Jun 23 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Aug 05 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Dec 03 1992 | 6.700 ppb | 1.902 |
| Mar 09 1993 | 0.250 ppb | -1.386 (* Nondetect *) |
| Jun 10 1993 | 0.250 ppb | -1.386 (* Nondetect *) |
| Aug 31 1993 | 0.250 ppb | -1.386 (* Nondetect *) |
| Nov 02 1993 | 0.250 ppb | -1.386 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 88

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.250 ppb | Ln Minimum: | -1.386 |
| Maximum: | 6.700 ppb | Ln Maximum: | 1.902 |
| Mean: | 1.056 ppb | Ln Mean: | -0.975 |
| Std. Dev.: | 2.280 ppb | Ln Std. Dev.: | 1.163 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Jun 23 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Aug 05 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Dec 03 1992 | 0.250 ppb | -1.386 (* Nondetect *) |
| Mar 09 1993 | 0.250 ppb | -1.386 (* Nondetect *) |
| Jun 10 1993 | 0.250 ppb | -1.386 (* Nondetect *) |
| Aug 31 1993 | 0.250 ppb | -1.386 (* Nondetect *) |
| Nov 02 1993 | 0.250 ppb | -1.386 (* Nondetect *) |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.250 ppb | Ln Minimum: | -1.386 |
| Maximum: | 0.250 ppb | Ln Maximum: | -1.386 |
| Mean: | 0.250 ppb | Ln Mean: | -1.386 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Data Set Summary

Report Printed: 05-30-1995 11:15

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:Coli Coliform

CAS Number:

MCL: 0.000 2c100ml

ACL: 0.000 2c100ml

Detect Limit: 2.000 2c100ml

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|---------------|-----------------------|
| Mar 30 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Jun 23 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Aug 05 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Dec 03 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Aug 31 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Nov 02 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND):100

| | | | |
|------------|---------------|---------------|-------|
| Minimum: | 1.000 2c100ml | Ln Minimum: | 0.000 |
| Maximum: | 1.000 2c100ml | Ln Maximum: | 0.000 |
| Mean: | 1.000 2c100ml | Ln Mean: | 0.000 |
| Std. Dev.: | 0.000 2c100ml | Ln Std. Dev.: | 0.000 |

Well ID:10MW1

Sample Date Observation

Ln

| | | |
|-------------|---------------|-----------------------|
| Mar 30 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Jun 23 1992 | 2.000 2c100ml | 0.693 |
| Aug 05 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Dec 03 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Aug 31 1993 | 2.000 2c100ml | 0.693 |
| Nov 02 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 75

| | | | |
|------------|---------------|---------------|-------|
| Minimum: | 1.000 2c100ml | Ln Minimum: | 0.000 |
| Maximum: | 2.000 2c100ml | Ln Maximum: | 0.693 |
| Mean: | 1.250 2c100ml | Ln Mean: | 0.173 |
| Std. Dev.: | 0.463 2c100ml | Ln Std. Dev.: | 0.321 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|---------------|-----------------------|
| Mar 30 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Jun 23 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Aug 05 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Dec 03 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Aug 31 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Nov 02 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|---------------|---------------|-------|
| Minimum: | 1.000 2c100ml | Ln Minimum: | 0.000 |
| Maximum: | 1.000 2c100ml | Ln Maximum: | 0.000 |
| Mean: | 1.000 2c100ml | Ln Mean: | 0.000 |
| Std. Dev.: | 0.000 2c100ml | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|---------------|-----------------------|
| Mar 30 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Jun 23 1992 | 2.000 2c100ml | 0.693 |
| Aug 05 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Dec 03 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Aug 31 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Nov 02 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |

Well ID:D3D Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 88

| | | | |
|------------|---------------|---------------|-------|
| Minimum: | 1.000 2c100ml | Ln Minimum: | 0.000 |
| Maximum: | 2.000 2c100ml | Ln Maximum: | 0.693 |
| Mean: | 1.125 2c100ml | Ln Mean: | 0.087 |
| Std. Dev.: | 0.354 2c100ml | Ln Std. Dev.: | 0.245 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|---------------|-----------------------|
| Mar 30 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Jun 23 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Aug 05 1992 | 4.000 2c100ml | 1.386 |
| Dec 03 1992 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Mar 09 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Jun 10 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Aug 31 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |
| Nov 02 1993 | 1.000 2c100ml | 0.000 (* Nondetect *) |

Well ID:DDH2 Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 88

| | | | |
|------------|---------------|---------------|-------|
| Minimum: | 1.000 2c100ml | Ln Minimum: | 0.000 |
| Maximum: | 4.000 2c100ml | Ln Maximum: | 1.386 |
| Mean: | 1.375 2c100ml | Ln Mean: | 0.173 |
| Std. Dev.: | 1.061 2c100ml | Ln Std. Dev.: | 0.490 |

Data Set Summary
Report Printed: 05-30-1995 11:16

Facility:RAAP Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford ST:VA Zip:24141
County:MONTGOMERY

Contact:Jerry Redder
Phone:(703) 639-7536

Permit Type:Detection

Constituent:Cond Specific Conductivity

CAS Number:

MCL: 0.000 umhos/cm

ACL: 0.000 umhos/cm

Detect Limit: 1.000 umhos/cm

Start Date:Mar 30 1992

End Date:Nov 02 1993

11 ID:D4

| Sample Date | Observation | Ln |
|-------------|------------------|-------|
| Mar 30 1992 | 390.000 umhos/cm | 5.966 |
| Jun 23 1992 | 410.000 umhos/cm | 6.016 |
| Aug 05 1992 | 410.000 umhos/cm | 6.016 |
| Dec 03 1992 | 370.000 umhos/cm | 5.914 |
| Mar 09 1993 | 350.000 umhos/cm | 5.858 |
| Jun 10 1993 | 360.000 umhos/cm | 5.886 |
| Aug 31 1993 | 350.000 umhos/cm | 5.858 |
| Nov 02 1993 | 360.000 umhos/cm | 5.886 |
| Mar 30 1992 | 390.000 umhos/cm | 5.966 |
| Jun 23 1992 | 410.000 umhos/cm | 6.016 |
| Aug 05 1992 | 410.000 umhos/cm | 6.016 |
| Dec 03 1992 | 370.000 umhos/cm | 5.914 |
| Mar 09 1993 | 360.000 umhos/cm | 5.886 |
| Jun 10 1993 | 350.000 umhos/cm | 5.858 |
| Aug 31 1993 | 340.000 umhos/cm | 5.829 |
| Nov 02 1993 | 340.000 umhos/cm | 5.829 |
| Mar 30 1992 | 390.000 umhos/cm | 5.966 |
| Jun 23 1992 | 410.000 umhos/cm | 6.016 |
| Aug 05 1992 | 410.000 umhos/cm | 6.016 |
| Dec 03 1992 | 370.000 umhos/cm | 5.914 |
| Mar 09 1993 | 350.000 umhos/cm | 5.858 |
| Jun 10 1993 | 340.000 umhos/cm | 5.829 |
| Aug 31 1993 | 340.000 umhos/cm | 5.829 |
| Nov 02 1993 | 350.000 umhos/cm | 5.858 |
| Mar 30 1992 | 390.000 umhos/cm | 5.966 |
| Jun 23 1992 | 410.000 umhos/cm | 6.016 |

| | | | |
|-------------|---------|----------|-------|
| Aug 05 1992 | 410.000 | umhos/cm | 6.016 |
| Dec 03 1992 | 370.000 | umhos/cm | 5.914 |
| Mar 09 1993 | 360.000 | umhos/cm | 5.886 |
| Jun 10 1993 | 330.000 | umhos/cm | 5.799 |
| Aug 31 1993 | 340.000 | umhos/cm | 5.829 |
| Nov 02 1993 | 340.000 | umhos/cm | 5.829 |

Well ID:D4 Summary Statistics

Observations (N) : 32

Nondetects (%ND) : 0

| | | | | |
|------------|---------|----------|---------------|-------|
| Minimum: | 330.000 | umhos/cm | Ln Minimum: | 5.799 |
| Maximum: | 410.000 | umhos/cm | Ln Maximum: | 6.016 |
| Mean: | 371.250 | umhos/cm | Ln Mean: | 5.914 |
| Std. Dev.: | 27.679 | umhos/cm | Ln Std. Dev.: | 0.074 |

Well ID:10MW1

| Sample Date | Observation | Ln |
|-------------|------------------|-------|
| Mar 30 1992 | 560.000 umhos/cm | 6.328 |
| Jun 23 1992 | 600.000 umhos/cm | 6.397 |
| Aug 05 1992 | 660.000 umhos/cm | 6.492 |
| Dec 03 1992 | 590.000 umhos/cm | 6.380 |
| Mar 09 1993 | 550.000 umhos/cm | 6.310 |
| Jun 10 1993 | 520.000 umhos/cm | 6.254 |
| Aug 31 1993 | 470.000 umhos/cm | 6.153 |
| Nov 02 1993 | 550.000 umhos/cm | 6.310 |
| Mar 30 1992 | 560.000 umhos/cm | 6.328 |
| Jun 23 1992 | 600.000 umhos/cm | 6.397 |
| Aug 05 1992 | 660.000 umhos/cm | 6.492 |
| Dec 03 1992 | 580.000 umhos/cm | 6.363 |
| Mar 09 1993 | 540.000 umhos/cm | 6.292 |
| Jun 10 1993 | 520.000 umhos/cm | 6.254 |
| Aug 31 1993 | 470.000 umhos/cm | 6.153 |
| Nov 02 1993 | 510.000 umhos/cm | 6.234 |
| Mar 30 1992 | 550.000 umhos/cm | 6.310 |
| Jun 23 1992 | 600.000 umhos/cm | 6.397 |
| Aug 05 1992 | 680.000 umhos/cm | 6.522 |
| Dec 03 1992 | 570.000 umhos/cm | 6.346 |
| Mar 09 1993 | 530.000 umhos/cm | 6.273 |
| Jun 10 1993 | 520.000 umhos/cm | 6.254 |
| Aug 31 1993 | 470.000 umhos/cm | 6.153 |
| Nov 02 1993 | 520.000 umhos/cm | 6.254 |
| Mar 30 1992 | 550.000 umhos/cm | 6.310 |
| Jun 23 1992 | 600.000 umhos/cm | 6.397 |
| Aug 05 1992 | 630.000 umhos/cm | 6.446 |
| Dec 03 1992 | 570.000 umhos/cm | 6.346 |
| Mar 09 1993 | 530.000 umhos/cm | 6.273 |
| Jun 10 1993 | 520.000 umhos/cm | 6.254 |
| Aug 31 1993 | 470.000 umhos/cm | 6.153 |
| Nov 02 1993 | 570.000 umhos/cm | 6.346 |

Well ID:10MW1 Summary Statistics

Observations (N): 32
Nondetects (%ND): 0

| | | | |
|------------|------------------|---------------|-------|
| Minimum: | 470.000 umhos/cm | Ln Minimum: | 6.153 |
| Maximum: | 680.000 umhos/cm | Ln Maximum: | 6.522 |
| Mean: | 556.875 umhos/cm | Ln Mean: | 6.318 |
| Std. Dev.: | 54.621 umhos/cm | Ln Std. Dev.: | 0.097 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------------|-------|
| Mar 30 1992 | 1320.000 umhos/cm | 7.185 |
| Jun 23 1992 | 1400.000 umhos/cm | 7.244 |
| Aug 05 1992 | 1300.000 umhos/cm | 7.170 |
| Dec 03 1992 | 1280.000 umhos/cm | 7.155 |
| Mar 09 1993 | 1200.000 umhos/cm | 7.090 |
| Jun 10 1993 | 860.000 umhos/cm | 6.757 |
| Aug 31 1993 | 890.000 umhos/cm | 6.791 |
| Nov 02 1993 | 920.000 umhos/cm | 6.824 |
| Mar 30 1992 | 1320.000 umhos/cm | 7.185 |
| Jun 23 1992 | 1400.000 umhos/cm | 7.244 |
| Aug 05 1992 | 1310.000 umhos/cm | 7.178 |
| Dec 03 1992 | 1270.000 umhos/cm | 7.147 |
| Mar 09 1993 | 1210.000 umhos/cm | 7.098 |
| Jun 10 1993 | 870.000 umhos/cm | 6.768 |
| Aug 31 1993 | 890.000 umhos/cm | 6.791 |
| Nov 02 1993 | 900.000 umhos/cm | 6.802 |
| Mar 30 1992 | 1320.000 umhos/cm | 7.185 |
| Jun 23 1992 | 1400.000 umhos/cm | 7.244 |
| Aug 05 1992 | 1310.000 umhos/cm | 7.178 |
| Dec 03 1992 | 1290.000 umhos/cm | 7.162 |
| Mar 09 1993 | 1220.000 umhos/cm | 7.107 |
| Jun 10 1993 | 870.000 umhos/cm | 6.768 |
| Aug 31 1993 | 890.000 umhos/cm | 6.791 |
| Nov 02 1993 | 900.000 umhos/cm | 6.802 |
| Mar 30 1992 | 1320.000 umhos/cm | 7.185 |
| Jun 23 1992 | 1400.000 umhos/cm | 7.244 |
| Aug 05 1992 | 1310.000 umhos/cm | 7.178 |
| Dec 03 1992 | 1270.000 umhos/cm | 7.147 |
| Mar 09 1993 | 1200.000 umhos/cm | 7.090 |
| Jun 10 1993 | 860.000 umhos/cm | 6.757 |
| Aug 31 1993 | 890.000 umhos/cm | 6.791 |
| Nov 02 1993 | 900.000 umhos/cm | 6.802 |

Well ID:D3 Summary Statistics

Observations (N): 32
Nondetects (%ND): 0

| | | | |
|------------|-------------------|---------------|-------|
| Minimum: | 860.000 umhos/cm | Ln Minimum: | 6.757 |
| Maximum: | 1400.000 umhos/cm | Ln Maximum: | 7.244 |
| Mean: | 1146.563 umhos/cm | Ln Mean: | 7.027 |
| Std. Dev.: | 210.921 umhos/cm | Ln Std. Dev.: | 0.193 |

| Sample Date | Observation | Ln |
|-------------|-------------------|-------|
| Mar 30 1992 | 1190.000 umhos/cm | 7.082 |
| Jun 23 1992 | 1200.000 umhos/cm | 7.090 |
| Aug 05 1992 | 1260.000 umhos/cm | 7.139 |
| Dec 03 1992 | 1140.000 umhos/cm | 7.039 |
| Mar 09 1993 | 1120.000 umhos/cm | 7.021 |
| Jun 10 1993 | 1070.000 umhos/cm | 6.975 |
| Aug 31 1993 | 1030.000 umhos/cm | 6.937 |
| Nov 02 1993 | 820.000 umhos/cm | 6.709 |
| Mar 30 1992 | 1190.000 umhos/cm | 7.082 |
| Jun 23 1992 | 1200.000 umhos/cm | 7.090 |
| Aug 05 1992 | 1280.000 umhos/cm | 7.155 |
| Dec 03 1992 | 1150.000 umhos/cm | 7.048 |
| Mar 09 1993 | 1130.000 umhos/cm | 7.030 |
| Jun 10 1993 | 1040.000 umhos/cm | 6.947 |
| Aug 31 1993 | 1030.000 umhos/cm | 6.937 |
| Nov 02 1993 | 870.000 umhos/cm | 6.768 |
| Mar 30 1992 | 1190.000 umhos/cm | 7.082 |
| Jun 23 1992 | 1200.000 umhos/cm | 7.090 |
| Aug 05 1992 | 1260.000 umhos/cm | 7.139 |
| Dec 03 1992 | 1150.000 umhos/cm | 7.048 |
| Mar 09 1993 | 1120.000 umhos/cm | 7.021 |
| Jun 10 1993 | 1020.000 umhos/cm | 6.928 |
| Aug 31 1993 | 1040.000 umhos/cm | 6.947 |
| Nov 02 1993 | 920.000 umhos/cm | 6.824 |
| Mar 30 1992 | 1190.000 umhos/cm | 7.082 |
| Jun 23 1992 | 1200.000 umhos/cm | 7.090 |
| Aug 05 1992 | 1240.000 umhos/cm | 7.123 |
| Dec 03 1992 | 1150.000 umhos/cm | 7.048 |
| Mar 09 1993 | 1120.000 umhos/cm | 7.021 |
| Jun 10 1993 | 1020.000 umhos/cm | 6.928 |
| Aug 31 1993 | 1030.000 umhos/cm | 6.937 |
| Nov 02 1993 | 940.000 umhos/cm | 6.846 |

Well ID:D3D Summary Statistics

Observations (N) : 32
 Nondetects (%ND) : 0

| | | | |
|------------|-------------------|---------------|-------|
| Minimum: | 820.000 umhos/cm | Ln Minimum: | 6.709 |
| Maximum: | 1280.000 umhos/cm | Ln Maximum: | 7.155 |
| Mean: | 1109.688 umhos/cm | Ln Mean: | 7.006 |
| Std. Dev.: | 114.821 umhos/cm | Ln Std. Dev.: | 0.109 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------------|-------|
| Mar 30 1992 | 1460.000 umhos/cm | 7.286 |
| Jun 23 1992 | 1400.000 umhos/cm | 7.244 |
| Aug 05 1992 | 1440.000 umhos/cm | 7.272 |
| Dec 03 1992 | 1490.000 umhos/cm | 7.307 |
| Mar 09 1993 | 1320.000 umhos/cm | 7.185 |
| Jun 10 1993 | 1310.000 umhos/cm | 7.178 |

| | | | |
|-------------|----------|----------|-------|
| Aug 31 1993 | 1190.000 | umhos/cm | 7.082 |
| Nov 02 1993 | 1120.000 | umhos/cm | 7.021 |
| Mar 30 1992 | 1460.000 | umhos/cm | 7.286 |
| Jun 23 1992 | 1400.000 | umhos/cm | 7.244 |
| Aug 05 1992 | 1430.000 | umhos/cm | 7.265 |
| Dec 03 1992 | 1460.000 | umhos/cm | 7.286 |
| Mar 09 1993 | 1320.000 | umhos/cm | 7.185 |
| Jun 10 1993 | 1320.000 | umhos/cm | 7.185 |
| Aug 31 1993 | 1190.000 | umhos/cm | 7.082 |
| Nov 02 1993 | 1100.000 | umhos/cm | 7.003 |
| Mar 30 1992 | 1460.000 | umhos/cm | 7.286 |
| Jun 23 1992 | 1400.000 | umhos/cm | 7.244 |
| Aug 05 1992 | 1450.000 | umhos/cm | 7.279 |
| Dec 03 1992 | 1490.000 | umhos/cm | 7.307 |
| Mar 09 1993 | 1320.000 | umhos/cm | 7.185 |
| Jun 10 1993 | 1320.000 | umhos/cm | 7.185 |
| Aug 31 1993 | 1200.000 | umhos/cm | 7.090 |
| Nov 02 1993 | 1080.000 | umhos/cm | 6.985 |
| Mar 30 1992 | 1460.000 | umhos/cm | 7.286 |
| Jun 23 1992 | 1400.000 | umhos/cm | 7.244 |
| Aug 05 1992 | 1450.000 | umhos/cm | 7.279 |
| Dec 03 1992 | 1500.000 | umhos/cm | 7.313 |
| Mar 09 1993 | 1320.000 | umhos/cm | 7.185 |
| Jun 10 1993 | 1320.000 | umhos/cm | 7.185 |
| Aug 31 1993 | 1180.000 | umhos/cm | 7.073 |
| Nov 02 1993 | 1090.000 | umhos/cm | 6.994 |

Well ID: DDH2 Summary Statistics

Observations (N) : 32

Nondetects (%ND) : 0

| | | | |
|------------|-------------------|---------------|-------|
| Minimum: | 1080.000 umhos/cm | Ln Minimum: | 6.985 |
| Maximum: | 1500.000 umhos/cm | Ln Maximum: | 7.313 |
| Mean: | 1339.062 umhos/cm | Ln Mean: | 7.195 |
| Std. Dev.: | 130.665 umhos/cm | Ln Std. Dev.: | 0.102 |

Data Set Summary

Report Printed: 05-30-1995 13:16

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:(* No Permit Type Specified *)

Constituent:Cr Chromium, total

CAS Number: 7440-47-3

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 10.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln | |
|-------------|-------------|-------|-----------------|
| Mar 30 1992 | 5.000 ppb | 1.609 | (* Nondetect *) |
| Jun 23 1992 | 15.000 ppb | 2.708 | |
| Aug 05 1992 | 36.000 ppb | 3.584 | |
| Dec 03 1992 | 5.000 ppb | 1.609 | (* Nondetect *) |
| Mar 09 1993 | 5.000 ppb | 1.609 | (* Nondetect *) |
| Jun 10 1993 | 5.000 ppb | 1.609 | (* Nondetect *) |
| Aug 31 1993 | 5.000 ppb | 1.609 | (* Nondetect *) |
| Nov 02 1993 | 5.000 ppb | 1.609 | (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 75

| | | | |
|------------|------------|---------------|-------|
| Minimum: | 5.000 ppb | Ln Minimum: | 1.609 |
| Maximum: | 36.000 ppb | Ln Maximum: | 3.584 |
| Mean: | 10.125 ppb | Ln Mean: | 1.994 |
| Std. Dev.: | 11.025 ppb | Ln Std. Dev.: | 0.749 |

Well ID:10MW1

Sample Date Observation Ln

| | | |
|-------------|------------|-----------------------|
| Mar 30 1992 | 12.000 ppb | 2.485 |
| Jun 23 1992 | 17.000 ppb | 2.833 |
| Aug 05 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Dec 03 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Mar 09 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 10 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 31 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Nov 02 1993 | 5.000 ppb | 1.609 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 75

| | | | |
|------------|------------|---------------|-------|
| Minimum: | 5.000 ppb | Ln Minimum: | 1.609 |
| Maximum: | 17.000 ppb | Ln Maximum: | 2.833 |
| Mean: | 7.375 ppb | Ln Mean: | 1.872 |
| Std. Dev.: | 4.596 ppb | Ln Std. Dev.: | 0.495 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 23 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 05 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Dec 03 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Mar 09 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 10 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 31 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Nov 02 1993 | 5.000 ppb | 1.609 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 5.000 ppb | Ln Minimum: | 1.609 |
| Maximum: | 5.000 ppb | Ln Maximum: | 1.609 |
| Mean: | 5.000 ppb | Ln Mean: | 1.609 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 23 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 05 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Dec 03 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Mar 09 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 10 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 31 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Nov 02 1993 | 5.000 ppb | 1.609 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 5.000 ppb | Ln Minimum: | 1.609 |
| Maximum: | 5.000 ppb | Ln Maximum: | 1.609 |
| Mean: | 5.000 ppb | Ln Mean: | 1.609 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 23 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 05 1992 | 55.000 ppb | 4.007 |
| Dec 03 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Mar 09 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 10 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 31 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Nov 02 1993 | 5.000 ppb | 1.609 (* Nondetect *) |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 88

| | | | |
|------------|------------|---------------|-------|
| Minimum: | 5.000 ppb | Ln Minimum: | 1.609 |
| Maximum: | 55.000 ppb | Ln Maximum: | 4.007 |
| Mean: | 11.250 ppb | Ln Mean: | 1.909 |
| Std. Dev.: | 17.678 ppb | Ln Std. Dev.: | 0.848 |

Data Set Summary

Report Printed: 05-30-1995 13:22

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:(* No Permit Type Specified *)

Constituent:Cr dis Chromium, dissolved

CAS Number: 7440-47-3

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 10.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

11 ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 23 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 05 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Dec 03 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Mar 09 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 10 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 31 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Nov 02 1993 | 5.000 ppb | 1.609 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND):100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 5.000 ppb | Ln Minimum: | 1.609 |
| Maximum: | 5.000 ppb | Ln Maximum: | 1.609 |
| Mean: | 5.000 ppb | Ln Mean: | 1.609 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

11 ID:10MW1

Sample Date Observation Ln

| | | |
|-------------|-----------|-----------------------|
| Mar 30 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 23 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 05 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Dec 03 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Mar 09 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 10 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 31 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Nov 02 1993 | 5.000 ppb | 1.609 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 5.000 ppb | Ln Minimum: | 1.609 |
| Maximum: | 5.000 ppb | Ln Maximum: | 1.609 |
| Mean: | 5.000 ppb | Ln Mean: | 1.609 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 23 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 05 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Dec 03 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Mar 09 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 10 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 31 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Nov 02 1993 | 5.000 ppb | 1.609 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 5.000 ppb | Ln Minimum: | 1.609 |
| Maximum: | 5.000 ppb | Ln Maximum: | 1.609 |
| Mean: | 5.000 ppb | Ln Mean: | 1.609 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 23 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 05 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Dec 03 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Mar 09 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 10 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 31 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Nov 02 1993 | 5.000 ppb | 1.609 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N): 8
Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 5.000 ppb | Ln Minimum: | 1.609 |
| Maximum: | 5.000 ppb | Ln Maximum: | 1.609 |
| Mean: | 5.000 ppb | Ln Mean: | 1.609 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 23 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 05 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Dec 03 1992 | 5.000 ppb | 1.609 (* Nondetect *) |
| Mar 09 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Jun 10 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Aug 31 1993 | 5.000 ppb | 1.609 (* Nondetect *) |
| Nov 02 1993 | 5.000 ppb | 1.609 (* Nondetect *) |

Well ID:DDH2

Summary Statistics

Observations (N): 8
Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 5.000 ppb | Ln Minimum: | 1.609 |
| Maximum: | 5.000 ppb | Ln Maximum: | 1.609 |
| Mean: | 5.000 ppb | Ln Mean: | 1.609 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Data Set Summary

Report Printed: 05-30-1995 11:25

Facility:RAAP Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford
County:MONTGOMERY

ST:VA Zip:24141

Contact:Jerry Redder
Phone:(703) 639-7536

Permit Type:Detection

Constituent:Cu Copper, total

CAS Number: 7440-50-8

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 1.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|--------------|-------------|------------------------|
| Mar 30 1992 | 7.000 ppb | 1.946 |
| Jun 23 1992 | 7.000 ppb | 1.946 |
| Aug 05 1992 | 26.000 ppb | 3.258 |
| Dec 03 1992 | 5.000 ppb | 1.609 |
| Mar 09 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Jun 10 1993 | 3.000 ppb | 1.099 |
| Aug 31 1993 | 6.000 ppb | 1.792 |
| Nov. 02 1993 | 0.500 ppb | -0.693 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 25

| | | | |
|------------|------------|---------------|--------|
| Minimum: | 0.500 ppb | Ln Minimum: | -0.693 |
| Maximum: | 26.000 ppb | Ln Maximum: | 3.258 |
| Mean: | 6.875 ppb | Ln Mean: | 1.283 |
| Std. Dev.: | 8.162 ppb | Ln Std. Dev.: | 1.362 |

Well ID:10MW1

Sample Date Observation Ln

| | | |
|-------------|------------|------------------------|
| Mar 30 1992 | 7.000 ppb | 1.946 |
| Jun 23 1992 | 6.000 ppb | 1.792 |
| Aug 05 1992 | 13.000 ppb | 2.565 |
| Dec 03 1992 | 1.000 ppb | 0.000 |
| Mar 09 1993 | 6.000 ppb | 1.792 |
| Jun 10 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Aug 31 1993 | 2.000 ppb | 0.693 |
| Nov 02 1993 | 2.000 ppb | 0.693 |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 13

| | | | |
|------------|------------|---------------|--------|
| Minimum: | 0.500 ppb | Ln Minimum: | -0.693 |
| Maximum: | 13.000 ppb | Ln Maximum: | 2.565 |
| Mean: | 4.688 ppb | Ln Mean: | 1.098 |
| Std. Dev.: | 4.200 ppb | Ln Std. Dev.: | 1.107 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 7.000 ppb | 1.946 |
| Jun 23 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Aug 05 1992 | 4.000 ppb | 1.386 |
| Dec 03 1992 | 3.000 ppb | 1.099 |
| Mar 09 1993 | 5.000 ppb | 1.609 |
| Jun 10 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Aug 31 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Nov 02 1993 | 0.500 ppb | -0.693 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 50

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.500 ppb | Ln Minimum: | -0.693 |
| Maximum: | 7.000 ppb | Ln Maximum: | 1.946 |
| Mean: | 2.625 ppb | Ln Mean: | 0.408 |
| Std. Dev.: | 2.532 ppb | Ln Std. Dev.: | 1.201 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 12.000 ppb | 2.485 |
| Jun 23 1992 | 4.000 ppb | 1.386 |
| Aug 05 1992 | 4.000 ppb | 1.386 |
| Dec 03 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Mar 09 1993 | 9.000 ppb | 2.197 |
| Jun 10 1993 | 5.000 ppb | 1.609 |
| Aug 31 1993 | 5.000 ppb | 1.609 |
| Nov 02 1993 | 0.500 ppb | -0.693 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 25

| | | | |
|------------|------------|---------------|--------|
| Minimum: | 0.500 ppb | Ln Minimum: | -0.693 |
| Maximum: | 12.000 ppb | Ln Maximum: | 2.485 |
| Mean: | 5.000 ppb | Ln Mean: | 1.161 |
| Std. Dev.: | 3.919 ppb | Ln Std. Dev.: | 1.207 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 3.000 ppb | 1.099 |
| Jun 23 1992 | 1.000 ppb | 0.000 |
| Aug 05 1992 | 23.000 ppb | 3.135 |
| Dec 03 1992 | 6.000 ppb | 1.792 |
| Mar 09 1993 | 7.000 ppb | 1.946 |
| Jun 10 1993 | 2.000 ppb | 0.693 |
| Aug 31 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Nov 02 1993 | 1.000 ppb | 0.000 |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 13

| | | | |
|------------|------------|---------------|--------|
| Minimum: | 0.500 ppb | Ln Minimum: | -0.693 |
| Maximum: | 23.000 ppb | Ln Maximum: | 3.135 |
| Mean: | 5.438 ppb | Ln Mean: | 0.996 |
| Std. Dev.: | 7.490 ppb | Ln Std. Dev.: | 1.257 |

Data Set Summary

Report Printed: 05-30-1995 11:28

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:Cu dis Copper, dissolved

CAS Number: 7440-50-8

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 1.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 2.000 ppb | 0.693 |
| Jun 23 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Aug 05 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Dec 03 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Mar 09 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Jun 10 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Aug 31 1993 | 1.000 ppb | 0.000 |
| Nov 02 1993 | 0.500 ppb | -0.693 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 75

Minimum: 0.500 ppb
Maximum: 2.000 ppb
Mean: 0.750 ppb
Std. Dev.: 0.535 ppb

Ln Minimum: -0.693
Ln Maximum: 0.693
Ln Mean: -0.433
Ln Std. Dev.: 0.516

Well ID:10MW1

| Sample Date | Observation | Ln |
|-------------|-------------|----|
|-------------|-------------|----|

| | | |
|-------------|-----------|------------------------|
| Mar 30 1992 | 3.000 ppb | 1.099 |
| Jun 23 1992 | 1.000 ppb | 0.000 |
| Aug 05 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Dec 03 1992 | 2.000 ppb | 0.693 |
| Mar 09 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Jun 10 1993 | 3.000 ppb | 1.099 |
| Aug 31 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Nov 02 1993 | 0.500 ppb | -0.693 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 50

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.500 ppb | Ln Minimum: | -0.693 |
| Maximum: | 3.000 ppb | Ln Maximum: | 1.099 |
| Mean: | 1.375 ppb | Ln Mean: | 0.015 |
| Std. Dev.: | 1.126 ppb | Ln Std. Dev.: | 0.829 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 2.000 ppb | 0.693 |
| Jun 23 1992 | 2.000 ppb | 0.693 |
| Aug 05 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Dec 03 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Mar 09 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Jun 10 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Aug 31 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Nov 02 1993 | 0.500 ppb | -0.693 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 75

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.500 ppb | Ln Minimum: | -0.693 |
| Maximum: | 2.000 ppb | Ln Maximum: | 0.693 |
| Mean: | 0.875 ppb | Ln Mean: | -0.347 |
| Std. Dev.: | 0.694 ppb | Ln Std. Dev.: | 0.642 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Jun 23 1992 | 2.000 ppb | 0.693 |
| Aug 05 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Dec 03 1992 | 2.000 ppb | 0.693 |
| Mar 09 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Jun 10 1993 | 3.000 ppb | 1.099 |
| Aug 31 1993 | 3.000 ppb | 1.099 |
| Nov 02 1993 | 0.500 ppb | -0.693 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 50

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.500 ppb | Ln Minimum: | -0.693 |
| Maximum: | 3.000 ppb | Ln Maximum: | 1.099 |
| Mean: | 1.500 ppb | Ln Mean: | 0.101 |
| Std. Dev.: | 1.134 ppb | Ln Std. Dev.: | 0.863 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|------------------------|
| Mar 30 1992 | 1.000 ppb | 0.000 |
| Jun 23 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Aug 05 1992 | 0.500 ppb | -0.693 (* Nondetect *) |
| Dec 03 1992 | 2.000 ppb | 0.693 |
| Mar 09 1993 | 0.500 ppb | -0.693 (* Nondetect *) |
| Jun 10 1993 | 2.000 ppb | 0.693 |
| Aug 31 1993 | 4.000 ppb | 1.386 |
| Nov 02 1993 | 1.000 ppb | 0.000 |

Well ID:DDH2

Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 38

| | | | |
|------------|-----------|---------------|--------|
| Minimum: | 0.500 ppb | Ln Minimum: | -0.693 |
| Maximum: | 4.000 ppb | Ln Maximum: | 1.386 |
| Mean: | 1.438 ppb | Ln Mean: | 0.087 |
| Std. Dev.: | 1.208 ppb | Ln Std. Dev.: | 0.780 |

Data Set Summary

Report Printed: 05-30-1995 11:30

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:Cyanide Cyanide, total

CAS Number: 143-33-9

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 20.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Jun 23 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Aug 05 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Dec 03 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Mar 09 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Jun 10 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Aug 31 1993 | 15.000 ppb | 2.708 |
| Nov 02 1993 | 10.000 ppb | 2.303 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 88

| | |
|------------|------------|
| Minimum: | 10.000 ppb |
| Maximum: | 15.000 ppb |
| Mean: | 10.625 ppb |
| Std. Dev.: | 1.768 ppb |

| | |
|---------------|-------|
| Ln Minimum: | 2.303 |
| Ln Maximum: | 2.708 |
| Ln Mean: | 2.353 |
| Ln Std. Dev.: | 0.143 |

Well ID:10MW1

Sample Date Observation

Ln

| | | |
|-------------|------------|-----------------------|
| Mar 30 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Jun 23 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Aug 05 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Dec 03 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Mar 09 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Jun 10 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Aug 31 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Nov 02 1993 | 10.000 ppb | 2.303 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|------------|---------------|-------|
| Minimum: | 10.000 ppb | Ln Minimum: | 2.303 |
| Maximum: | 10.000 ppb | Ln Maximum: | 2.303 |
| Mean: | 10.000 ppb | Ln Mean: | 2.303 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Jun 23 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Aug 05 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Dec 03 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Mar 09 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Jun 10 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Aug 31 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Nov 02 1993 | 10.000 ppb | 2.303 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N) : 8
 Nondetects (%ND) : 100

| | | | |
|------------|------------|---------------|-------|
| Minimum: | 10.000 ppb | Ln Minimum: | 2.303 |
| Maximum: | 10.000 ppb | Ln Maximum: | 2.303 |
| Mean: | 10.000 ppb | Ln Mean: | 2.303 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Jun 23 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Aug 05 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Dec 03 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Mar 09 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Jun 10 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Aug 31 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Nov 02 1993 | 10.000 ppb | 2.303 (* Nondetect *) |

Well ID:D3D Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|------------|---------------|-------|
| Minimum: | 10.000 ppb | Ln Minimum: | 2.303 |
| Maximum: | 10.000 ppb | Ln Maximum: | 2.303 |
| Mean: | 10.000 ppb | Ln Mean: | 2.303 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Jun 23 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Aug 05 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Dec 03 1992 | 10.000 ppb | 2.303 (* Nondetect *) |
| Mar 09 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Jun 10 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Aug 31 1993 | 10.000 ppb | 2.303 (* Nondetect *) |
| Nov 02 1993 | 10.000 ppb | 2.303 (* Nondetect *) |

Well ID:DDH2 Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|------------|---------------|-------|
| Minimum: | 10.000 ppb | Ln Minimum: | 2.303 |
| Maximum: | 10.000 ppb | Ln Maximum: | 2.303 |
| Mean: | 10.000 ppb | Ln Mean: | 2.303 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Data Set Summary

Report Printed: 05-30-1995 11:31

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:Di-N-Bu Di-n-Butylphthalate

CAS Number: 84-74-2

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 3.600 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Jun 23 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Aug 05 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Dec 03 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Mar 09 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Jun 10 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Aug 31 1993 | 15.000 ppb | 2.708 |
| Nov 02 1993 | 1.800 ppb | 0.588 (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 88

Minimum: 1.800 ppb
Maximum: 15.000 ppb
Mean: 3.450 ppb
Std. Dev.: 4.667 ppb

Ln Minimum: 0.588
Ln Maximum: 2.708
Ln Mean: 0.853
Ln Std. Dev.: 0.750

Well ID:10MW1

Sample Date Observation

Ln

| | | |
|-------------|-----------|-----------------------|
| Mar 30 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Jun 23 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Aug 05 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Dec 03 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Mar 09 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Jun 10 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Aug 31 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Nov 02 1993 | 1.800 ppb | 0.588 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.800 ppb | Ln Minimum: | 0.588 |
| Maximum: | 1.800 ppb | Ln Maximum: | 0.588 |
| Mean: | 1.800 ppb | Ln Mean: | 0.588 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Jun 23 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Aug 05 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Dec 03 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Mar 09 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Jun 10 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Aug 31 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Nov 02 1993 | 1.800 ppb | 0.588 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.800 ppb | Ln Minimum: | 0.588 |
| Maximum: | 1.800 ppb | Ln Maximum: | 0.588 |
| Mean: | 1.800 ppb | Ln Mean: | 0.588 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Jun 23 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Aug 05 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Dec 03 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Mar 09 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Jun 10 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Aug 31 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Nov 02 1993 | 1.800 ppb | 0.588 (* Nondetect *) |

Well ID:D3D

Summary Statistics

Observations (N): 8
Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.800 ppb | Ln Minimum: | 0.588 |
| Maximum: | 1.800 ppb | Ln Maximum: | 0.588 |
| Mean: | 1.800 ppb | Ln Mean: | 0.588 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Jun 23 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Aug 05 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Dec 03 1992 | 1.800 ppb | 0.588 (* Nondetect *) |
| Mar 09 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Jun 10 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Aug 31 1993 | 1.800 ppb | 0.588 (* Nondetect *) |
| Nov 02 1993 | 1.800 ppb | 0.588 (* Nondetect *) |

Well ID:DDH2

Summary Statistics

Observations (N): 8
Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 1.800 ppb | Ln Minimum: | 0.588 |
| Maximum: | 1.800 ppb | Ln Maximum: | 0.588 |
| Mean: | 1.800 ppb | Ln Mean: | 0.588 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Data Set Summary

Report Printed: 05-30-1995 11:32

Facility:RAAP Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford
County:MONTGOMERY

ST:VA Zip:24141

Contact:Jerry Redder
Phone:(703) 639-7536

Permit Type:Detection

Constituent:Endrin Endrin

CAS Number: 72-20-8

MCL: 0.200 ppb

ACL: 0.000 ppb

Detect Limit: 6.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

Well ID:D4

| Sample Date | Observation | Ln | |
|-------------|-------------|-------|-----------------|
| Mar 30 1992 | 3.000 ppb | 1.099 | (* Nondetect *) |
| Jun 23 1992 | 3.000 ppb | 1.099 | (* Nondetect *) |
| Aug 05 1992 | 3.000 ppb | 1.099 | (* Nondetect *) |
| Dec 03 1992 | 3.000 ppb | 1.099 | (* Nondetect *) |
| Mar 09 1993 | 3.000 ppb | 1.099 | (* Nondetect *) |
| Jun 10 1993 | 3.000 ppb | 1.099 | (* Nondetect *) |
| Aug 31 1993 | 3.000 ppb | 1.099 | (* Nondetect *) |
| Nov 02 1993 | 3.000 ppb | 1.099 | (* Nondetect *) |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND):100

| | |
|------------|-----------|
| Minimum: | 3.000 ppb |
| Maximum: | 3.000 ppb |
| Mean: | 3.000 ppb |
| Std. Dev.: | 0.000 ppb |

| | |
|---------------|-------|
| Ln Minimum: | 1.099 |
| Ln Maximum: | 1.099 |
| Ln Mean: | 1.099 |
| Ln Std. Dev.: | 0.000 |

Well ID:10MW1

| Sample Date | Observation | Ln |
|-------------|-------------|----|
|-------------|-------------|----|

| | | |
|-------------|-----------|-----------------------|
| Mar 30 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Jun 23 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Aug 05 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Dec 03 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Mar 09 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Jun 10 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Aug 31 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Nov 02 1993 | 3.000 ppb | 1.099 (* Nondetect *) |

Well ID:10MW1 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 3.000 ppb | Ln Minimum: | 1.099 |
| Maximum: | 3.000 ppb | Ln Maximum: | 1.099 |
| Mean: | 3.000 ppb | Ln Mean: | 1.099 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Jun 23 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Aug 05 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Dec 03 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Mar 09 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Jun 10 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Aug 31 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Nov 02 1993 | 3.000 ppb | 1.099 (* Nondetect *) |

Well ID:D3 Summary Statistics

Observations (N): 8
 Nondetects (%ND): 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 3.000 ppb | Ln Minimum: | 1.099 |
| Maximum: | 3.000 ppb | Ln Maximum: | 1.099 |
| Mean: | 3.000 ppb | Ln Mean: | 1.099 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:D3D

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Jun 23 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Aug 05 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Dec 03 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Mar 09 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Jun 10 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Aug 31 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Nov 02 1993 | 3.000 ppb | 1.099 (* Nondetect *) |

Well ID:D3D Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 3.000 ppb | Ln Minimum: | 1.099 |
| Maximum: | 3.000 ppb | Ln Maximum: | 1.099 |
| Mean: | 3.000 ppb | Ln Mean: | 1.099 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Well ID:DDH2

| Sample Date | Observation | Ln |
|-------------|-------------|-----------------------|
| Mar 30 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Jun 23 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Aug 05 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Dec 03 1992 | 3.000 ppb | 1.099 (* Nondetect *) |
| Mar 09 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Jun 10 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Aug 31 1993 | 3.000 ppb | 1.099 (* Nondetect *) |
| Nov 02 1993 | 3.000 ppb | 1.099 (* Nondetect *) |

Well ID:DDH2 Summary Statistics

Observations (N) : 8
Nondetects (%ND) : 100

| | | | |
|------------|-----------|---------------|-------|
| Minimum: | 3.000 ppb | Ln Minimum: | 1.099 |
| Maximum: | 3.000 ppb | Ln Maximum: | 1.099 |
| Mean: | 3.000 ppb | Ln Mean: | 1.099 |
| Std. Dev.: | 0.000 ppb | Ln Std. Dev.: | 0.000 |

Data Set Summary

Report Printed: 05-30-1995 11:34

Facility:RAAP

Radford Army Ammunition Plant

Address:P.O. Box 1

City:Radford

ST:VA Zip:24141

County:MONTGOMERY

Contact:Jerry Redder

Phone:(703) 639-7536

Permit Type:Detection

Constituent:Fe Iron, total

CAS Number: 7439-89-6

MCL: 0.000 ppb

ACL: 0.000 ppb

Detect Limit: 1.000 ppb

Start Date:Mar 30 1992

End Date:Nov 02 1993

11 ID:D4

| Sample Date | Observation | Ln |
|-------------|---------------|--------|
| Mar 30 1992 | 210.000 ppb | 5.347 |
| Jun 23 1992 | 67000.000 ppb | 11.112 |
| Aug 05 1992 | 36000.000 ppb | 10.491 |
| Dec 03 1992 | 150.000 ppb | 5.011 |
| Mar 09 1993 | 810.000 ppb | 6.697 |
| Jun 10 1993 | 1300.000 ppb | 7.170 |
| Aug 31 1993 | 2.000 ppb | 0.693 |
| Nov 02 1993 | 100.000 ppb | 4.605 |

Well ID:D4 Summary Statistics

Observations (N): 8

Nondetects (%ND): 0

Minimum: 2.000 ppb
Maximum: 67000.000 ppb
Mean: 13196.500 ppb
Std. Dev.: 25054.916 ppb

Ln Minimum: 0.693
Ln Maximum: 11.112
Ln Mean: 6.391
Ln Std. Dev.: 3.348

Well ID:10MW1

Sample Date Observation Ln